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ABSTRACT

This document details the proceedings of the second meeting of the Steering Committee for the SEAMES Regional Centre for Education in Science and Mathematics (RECSAM) held in Bandung, Indonesia, from October 16-19, 1967. This meeting examined and approved, after revision, a Draft Development Plan prepared by the Interim Project Office on the basis of the findings of six national and one regional seminar. Plans for the establishment of the Regional Centre for Education in Science and Mathematics on a permanent basis in Penang, Malaysia, are detailed. Contained in the Appendices are: financial procedures, proposed budgets, the draft agreement, the draft charter, a list of participants, and copies of addresses presented at this meeting. (BT)

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INDONESIA
MALAYSIA
PHILIPPINES
SINGAPORE
THAILAND
VIETNAM

**REPORT OF THE SECOND MEETING
OF THE
STEERING COMMITTEE FOR THE SEAMES
REGIONAL CENTRE FOR EDUCATION IN
SCIENCE AND MATHEMATICS**

Convened by
the Interim Project Office of the SEAMES Regional Centre
for Education in Science and Mathematics, Penang, Malaysia,
in collaboration with
the Institute of Technology, Bandung, Indonesia,
with the co-operation of
the Ministry of Education and Culture of the Government of
the Republic of Indonesia.

Project Office
Malayan Teachers' College
Penang,
Malaysia.

October 16 - 19, 1967
Indonesia
Bandung

SE 020 675

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S E A M E S

Member
Countries:

REPORT OF THE SECOND MEETING
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Bandung,
Indonesia.

16th - 19th October, 1967.

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PREFACE

THE SEAMES REGIONAL CENTRE FOR EDUCATION IN SCIENCE AND MATHEMATICS

A. BRIEF HISTORY 1965-1967:

1. SEAMES, which is the acronym for "South-East Asian Ministers of Education Secretariat," came into being as a result of the First Conference of the Ministers of Education of Laos, Malaysia, Philippines, Singapore, South Vietnam and Thailand in Bangkok on November 30, 1965, with Mr. Eugene Black, Special Adviser to the President of the United States of America on Asian Development. They discussed inter-regional co-operation in the field of education amongst countries of South-East Asia.
2. During the early part of 1966, SEAMES appointed a Feasibility Team, composed of Dr. W. Eilers, Representative of Asia Foundation, Malaysia, Dr. H. Foncannon of the National Science Foundation, United States of America and Mr. C.C. Little of the Summer Science Institute Programme, USAID/ED, India, to conduct a preliminary study relative to a proposed Regional Centre for Education in Science and Mathematics for South-East Asia. The Report of the Feasibility Team was examined at the Technical Workshops held in Kuala Lumpur, Malaysia, in July 1966 and further discussed by a Select Committee of Permanent Secretaries of the Ministries of Education of member countries on 17th to 21st October, 1966, in Bangkok. This proposal together with nine other proposals were then presented to the Second Conference of the Ministers of Education held in Manila in November 1966, at which Indonesia attended for the first time.
3. Five regional projects were approved at this Second Conference, namely the Asian Institute of Technology in Bangkok, Tropical Medical Centres in the member countries, a Regional Centre for Agriculture at Los Banos, Philippines, a Regional English Language Centre at Singapore and a Regional Centre for Education in Science and Mathematics at Penang, Malaysia.

B. PRE-PROJECT (OR INTERIM) PHASE - MAY TO DECEMBER 1967:

4. In May 1967, the Steering Committee for the proposed Regional Centre for Education in Science and Mathematics, composed of two delegates from each of the six participating countries, held its First Meeting in Penang, Malaysia. At this First Meeting, the Steering Committee recommended a Budget of US\$72,423 to carry out certain pre-project activities to enable it to identify the problems of teaching Science and Mathematics in this region and to prepare a Plan of Operations for the Regional Centre. It also agreed on the following objectives for the Regional Centre:

"to help the participating countries in improving the teaching of science and mathematics in the region in order that technically and scientifically trained manpower requirements of the region will be

adequately met. It is proposed to start initially at the elementary and secondary levels and to involve teacher training institutions and colleges of Education, Faculties of Mathematics and Science and other faculties as may be necessary in implementing the programme."

5. Following upon a request made to the U.S. Government through SEAMES for the necessary funds to carry out these pre-project activities, a letter of agreement was signed on the 30th June 1967 between the Hon'ble The Minister for Education, Malaysia, and the U.S.A. Ambassador to Malaysia, approving a budget of US\$50,000 towards financing the following pre-project activities of the Regional Centre for the interim phase, July to December 1967:

5.1 The First Meeting of the Task Force, composed of top-level educators from the member countries, representing the five subject areas of Biology, Chemistry, Elementary Science, Mathematics and Physics, was held at Singapore from 26th to 27th June, 1967, to draw up guide-lines for National Seminars in Science and Mathematics.

5.2 Six National Seminars in Science and Mathematics was held between July 20 and August 15, 1967 in the six participating Member States.

5.3 A Regional Seminar in Science and Mathematics was held at Penang, Malaysia, from 12th to 15th September, 1967, attended by five delegates from each of the six member countries to study the reports of the National Seminars and to draw up programme activities for the Regional Centre.

5.4 The Second Meeting of the Task Force was held in Penang from 16th to 19th September 1967 to draw up a Draft Plan of Operations for the Regional Centre.

5.5 The Second Meeting of the Steering Committee to be held in Bandung, Indonesia, from 16th to 19th October to consider the Draft Development Plan of Operations for submission to the Third Conference of Ministers of Education, scheduled for December 1967.

C. PERIOD: JANUARY - JUNE 1968:

6. At this Second Meeting, the Steering Committee in addition to considering the Draft Development Plan will be recommending as to whether the present interim phase, July to December 1967, should be extended to June 1968 or whether the proposed Regional Centre can become fully operational with effect from January 1968.

ADOPTION OF AGENDA

The proposed Agenda Annexure 1 for the Second Meeting of the Steering Committee was adopted with the following amendments:

- Item 3 : To receive SEAMIS/P5/SCMS/4 Report of the First Meeting of the Steering Committee for the Regional Centre for Education in Science and Mathematics held from 23rd - 25th May, 1967.
- Item 7 : To read "Appointment of Programme Co-ordinator and Terms of Appointment".
- Item 8 : Add -
 - (d) Second Meeting Task Force held in Penang from 15th - 18th September, 1967.

General Programme

The proposed General Programme Annexure 2 was accepted with minor changes in the First Plenary Session as follows:

- Item (iii) to become item (i)
- Item (i) to become item (ii)
- Item (ii) to become item (iii)

It was agreed that the meetings for Tuesday and Wednesday, 17th and 18th October, should begin at 8.30 a.m. instead of 9.00 a.m. and that the field trip for Thursday, 19th October, would begin at 7.00 a.m. instead of 9.00 a.m.

Item 3

ADOPTION OF REPORT SEANES/P5/SCMS/4

The Report of the First Meeting of the Steering Committee for the Regional Centre for Education in Science and Mathematics held in Penang, Malaysia, from 23rd - 25th May, 1967 was adopted with the following omission added on Page 39, Para. 4.5 -

"A total sum of US\$53,750 is proposed by the Sub-Committee but the National Co-ordinating Committee would like to propose an allocation of US\$30,000."

MATTERS ARISING

Item 4

- 4.1. A prepared paper Annexure 3 on "Matters Arising" - Summary of Decisions of the First Meeting of the Steering Committee held from 23-25 May, 1967" was tabled for discussion.
- 4.2. It was agreed to amend the objectives of the Regional Centre to read "The objectives of the Regional Centre will be to help participating countries in improving the teaching of Science and Mathematics in the Region in order to lay the foundations for meeting the technically and scientifically trained manpower requirements of the Region. It is proposed to start initially at the elementary and secondary levels and to involve teacher training institutions and Colleges of Education, Faculties of Mathematics and Science and other faculties as may be necessary in implementing the programmes."
- 4.3. Items 8 and 9 under Matters Arising would be discussed as Items 13 and 11 in the Agenda of the Meeting.
- 4.4. Under Item 11, the Chairman explained that Proposal 1 for \$3,479 had been spent at the First Meeting and that Proposal 5 for A & E Study of £20,000 would be funded later, giving a total of \$48,944 which represented the U.S. AID grant to the carrying out of the interim activities of the Regional Centre up to 31st December, 1967.
- 4.5. Under Item 12, the Chairman explained that since SEAMEC was in the interim phase and not a legally constituted organization, both the interim phase and the present Steering Committee are, as understood previously, also in the interim phase. Therefore, the matter of nominations and tenure of members of the Steering Committee after the interim phase should be considered after the formal establishment of SEAMEC.

Item 5

BUDGET FOR INTERIM PHASE AND FINANCIAL POSITION AS AT
30th SEPTEMBER, 1967.

5.1. The paper Annexure 4 prepared by the Chairman on the Financial procedure regarding how funds are disbursed to meet the expenses of the Regional Centre was tabled for discussion. The Chairman explained the position of the Malaysian Government in respect of operation of the Trust Account. In order to simplify the financial procedure and allow greater freedom to the Project Office to operate the account, the Programme Co-ordinator and the Consultant were asked to prepare a paper outlining such a procedure so that the Chairman could take the matter up with the Malaysian Government.

5.2. As regards the grants made to the Member States to organize National Seminars, it was announced that so far only the Philippines had rendered their complete statement of accounts together with a refund of US\$193.99 and that a grant of US\$1000 would be despatched to Vietnam as soon as possible. The Chairman requested all delegations, except the Philippines, to submit their accounts with supporting vouchers and receipts as soon as possible but not later than 15th Nov. 1967 to the Interim Project Office.

5.3. When the question of the credit of M\$145,195.88 (equivalent to US\$50,000) was raised, the Chairman explained that a bank commission was involved in the transaction of funds. The Committee requested the Chairman to look into the possibility of crediting the funds as a savings account in order to earn an interest to offset the loss in bank commission.

5.4. The Committee accepted that the secondment of Mr. C. Ganasalingam to SEAMES should be on terms not less favourable than what he is receiving in his present service and agreed that, in recognition of his added responsibilities as Programme Co-ordinator, he should be paid an inducement allowance of US\$ 60 per month.

Item 6

APPOINTMENT OF INTERIM PROJECT OFFICE STAFF

The Programme Co-ordinator presented a paper Annexure 5 showing the appointment of the Interim Project Office staff with dates of appointment and rates of salary corresponding to each position. The paper was accepted.

Item 7

Terms of Appointment of the Programme
Co-ordinator

7.1. A paper Annexure 6 showing the terms of appointment of the Programme Co-ordinator was presented for discussion.

7.2. It was agreed to accept terms (a) to (f).

In respect of (g), (h) and (i), the Chairman was requested to negotiate with the Malaysian Government to waive these terms.

RECEIVING OF REPORTS

The Committee received the following Reports:

- 8.1. Report of the First Meeting of the Task Force held in Singapore from 26th - 27th June, 1967.
- 8.2. Reports of National Seminars in Science and Mathematics (July - August 1967).
- 8.3. Report of Regional Seminar in Science and Mathematics held in Penang from 12th - 14th September, 1967.
- 8.4. Report of the Second Meeting of the Task Force held in Penang from 15th - 18th September, 1967.

DRAFT DEVELOPMENT PLANS (PLAN OF OPERATIONS)
FOR THE REGIONAL CENTRE

9.1 DEVELOPMENT PLAN:

The Committee made a summary of the entire plan and description of the planning, programming and budgeting (ppb) system, discussed the functional areas of the Centre, namely, training, research and development, special services and information centre and clearing house, and agreed that:

- 9.11 Functional organization for the Centre is more effective than organization according to disciplines and the Centre's relationship to existing research and teaching organizations should be carefully looked into (Please refer to Annexure 7)
- 9.12 The training function is the most urgent and the most important function of the Centre and its training programmes are intended primarily for key personnel in Science and Mathematics education rather than ordinary teachers.
- 9.13 Research is considered to be an important function of the Centre and it should not be on fundamental research but rather should be concentrated on the application and evaluation of research findings on methodology, teaching materials etc. to Science and Mathematics education in schools,
- 9.14 The most important part of the special services is the provision of consultant services for Member States and the functions pertaining to the proposed biological supplies section are inappropriate and therefore should be properly undertaken by other organizations.
- 9.15 The Information Centre and Clearing House function is vital to the effective growth of the Centre and should be the first division to be activated, since considerable work will have already begun during the interim phase and since facilities are already available.
- 9.16 Bearing in mind the above paragraphs and the fact that there should always be close co-operation and interaction between different projects and subject areas, the functions as outlined in the Operation Plan (Part I of the Development Plan) for the four Divisions will be carried out by the Centre. The priorities amongst the projects will be worked out by a Task Force and the Centre staff.

9.17 The composition of the Steering Committee should remain as it is and representations of industry, manpower planning, economic development and rural education, if required, should be obtained at the National Co-ordinating Committee level.

9.18 The consultants to be appointed to serve with the Centre must subscribe to the basic philosophy and objectives of the Centre as expressed in the Operation Plan.

9.2 OPERATION PLAN AND STAFFING REQUIREMENTS:

After the Consultant outlined how the Interim Project Office arrived at the operation plan and the staffing requirements, the Committee accepted:

9.21 The organization chart given on Page 40 of the Operation Plan.

9.22 The recommendations given in paragraphs 1 - 6 on Pages 40 - 42 of the Operation Plan with the minor amendment that the word "particularly" in line 2 of Page 42 be changed to "such as". The Singapore delegation abstained when para. 6 (a) and (b) were put to the vote. It proposed that this be left to SEAMEC.

9.3 BUDGET:

On the question of the proposed budget, the Committee considered at length the staffing requirements and the advantages and disadvantages of having international salary scales or reduced international salary scales or of following the salary scales of host countries where regional centres are located. The Committee with the exception of the Singapore delegation agreed to recommend to SEAMEC both the original budget proposal and the economy budget proposal. The Singapore delegation would prepare a third alternative budget proposal for consideration. However, concern was expressed by the other delegations that a cutting of the budget would greatly reduce the services that the Centre could render to the region.

9.4 EXECUTIVE SUMMARY AND CONCLUSIONS AND RECOMMENDATIONS:

The Committee reviewed the chapters on Executive Summary and Conclusions and Recommendations as given on Pages 1 - 12 of the Operation Plan and agreed that:

9.41 The interim phase of the Project Office be extended to 30th June, 1968, in order to have more time to:

9.411 refine the Operation Plan and work out the details of specific project proposals,

9.412 develop a funding scheme,

- 9.413 carry out Architectural and Engineering (A & E) Studies,
- 9.414 select the Director and other members of the professional staff.
- 9.415 clarify the legal situation and develop the proper legal agreements in order to establish the Centre as a legal entity.
- 9.42 The Task Force be reconvened with the following terms of reference:
 - 9.421 To refine the technical content for the various project proposals.
 - 9.422 To work out project priorities for the Centre.
 - 9.423 To draw up guide-lines for National Seminar on Instructional Materials.
 - 9.424 To review the manpower survey questionnaire.
- 9.43 An International Advisory Council with the following terms of reference be formed:
 - 9.431 Members to serve in an honorary capacity.
 - 9.432 To advise the Regional Centre and the Steering Committee in matters regarding projects, courses and other educational problems that the Centre may face from time to time and which are referred to the Council.
 - 9.433 To assist the Centre in obtaining suitable contacts with organizations, institutions, universities, colleges of education and in obtaining possible sources of financial assistance for project funding.
- 9.44 Names of the following scholars by subject areas and in order of preference were suggested for consideration:

Biology:

- 1. Dr. Bentley Glass (NAS-NRC, U.S.A.)
- 2. Dr. Maxwell Doty (University of Hawaii)
- 3. Dr. S. Dillon Ripley (Secretary, Smithsonian Institution, U.S.A.)

Chemistry:

- | | |
|--------------------------|--|
| 1. Prof. H.F. Halliwell | (University of East Anglia,
United Kingdom) |
| 2. Dr. E.C. Watton | (UNESCO, Bangkok) |
| 3. Prof. Arthur Campbell | (Chemistry Study) |

Elementary Science:

- | | |
|------------------------|---------------------------------------|
| 1. Prof. R. Karplus | (University of California,
U.S.A.) |
| 2. Dr. Philip Morrison | (UNESCO, U.S.A.) |
| 3. Mr. E.R. Wastnedge | (U.K.) |
| 4. Prof. C.W. Barnes | (New York University) |

Mathematics:

Secondary:

- | | |
|----------------------------|-----------------------------|
| 1. Prof. Marshall H. Stone | (Univ. Chicago, U.S.A.) |
| 2. Prof. M. Beberman | (Univ. of Illinois, U.S.A.) |
| 3. Prof. H.F. Fehr | (Columbia Univ. U.S.A.) |
| 4. Prof. Gustave Choquet | (Univ. of Paris, France) |

Elementary:

- | | |
|---------------------------|-----------------------------|
| 1. Miss E.E. Biggs | (H.M.I., U.K.) |
| 2. Prof. Charles Brumfiel | (U.S.A.) |
| 3. Dr. Z.P. Dienes | (Adelaide Univ., Australia) |

Physics:

- | | |
|--------------------|------------------------------|
| 1. Prof. K. Messel | (Univ. of Sydney, Australia) |
| 2. Prof. G. Halton | (Harvard University, U.S.A.) |
| 3. Prof. Zacharias | (M.I.T., U.S.A.) |

It was agreed to defer extending the invitations until the Interim Project Office has had time to explore the possibilities for other names of eminent educators representing scientific organisations.

Item 10

SCHEDULE OF ACTIVITIES OF THE PRE-PROJECT PERIOD
JULY - DECEMBER 1967 AND BUDGET PROVISION FOR
EXTENDING THE PRE-PROJECT PHASE

- 10.1. The Programme Co-ordinator gave a brief report of the activities of the Interim Project Office during the pre-project period ending December, 1967 and the Committee accepted his report.
- 10.2. The budget proposal for the extending the pre-project period to 30th June, 1968 was carefully considered and the amended budget proposal given in Annexure 8 was accepted.
- 10.3. The committee recommended that the lower budget figure of \$137,720 be accepted as against \$381,720. The offer by the Penang State Public Works Department to carry out the A & E Study shows a saving of \$244,000.

Item 11

LEGAL STATUS OF THE REGIONAL CENTRE AND ITS
RELATIONSHIP WITH THE MALAYSIAN GOVERNMENT

- 11.1. Regarding the problem of legalising the status of the Regional Centre the Legal Adviser to SEAMES presented the draft paper Annexure 9 embodying the proposed terms of agreement between the Government of Malaysia and the South East Asian Ministers of Education Organisation.
- 11.2. • With a few corrections, mainly in terminology which will be properly indicated in the final draft, the proposed draft was accepted.
- 11.3. The second paper presented was the draft of the proposed constitution of the SEAMES Regional Centre for Education in Science and Mathematics. This
* draft paper was accepted with the following insertion in Article VI para (b) its members; or the Centre Director.

* Annexure 10

Item 12 .

JOB DESCRIPTIONS OF THE STAFF OF THE REGIONAL CENTRE

12.1. Job description for the Centre Director

The job description is given in item VIB, page 44 of the Operation Plan, P5/SCMS/10. It was agreed to change the designation of the Director General to Centre Director and several changes made are embodied in Annexure 11.

12.2. Job description for the Deputy Centre Director

The job description for this post given in page 46 of the Operation Plan was accepted with the amendment that a minimum number of ten years of applicable experience was sufficient.

12.3. Job description for the Heads of Divisions

It was agreed that the job descriptions given in pages 47 - 50 of the Operation Plan were adequate to serve as guide lines for the Centre Director in the appointment of the Divisions of the Centre.

Divisional Heads

Item 13

GUIDELINES FOR FUNDING SCHEME

- 13.1. The paper Annexure 12 prepared by the SEAMES Office was presented for discussion.
- 13.2. The following schemes were recommended for consideration to SEAMES:
 - 13.21 50% of the cost of capital development outlay would be provided by U.S. AID sources.
 - 13.22 The remaining 50% of the capital development outlay would be the responsibility of the host country.
 - 13.23 50% of the operational costs would be provided by U.S. AID sources.
 - 13.24 The remaining 50% of the operational costs would be the joint responsibility of the participating member states. In this connection, it was deemed necessary that immediate steps be taken by SEAMES as well as the participating member states to tap sources of possible funding support either from within or outside the different Member States.

Item 14

FUTURE MEETINGS OF THE STEERING COMMITTEE

It was proposed that the next meeting would be held in Philippines in May or June 1968. The specific dates would be announced not later than 15th February, 1968.

OTHER MATTERS

- 15.1 The Chairman announced that the US. AID Regional Education Advisor had received approval for the extension of the present interim phase for the Regional Centre to June 1968 subject to acceptance of the proposed budget.
- 15.2 SEAMES Executive Secretary informed the Meeting that representatives of the different SEAMES Projects would be asked to meet shortly in Bangkok to prepare the Project Development Plans for presentation to the SEAMEC Meeting scheduled to be held in Singapore in December, 1967.
- 15.3 The problem that would be faced by the Regional Centre should the South-East Asian Ministers Organization fail to acquire a legal status before 1st July, 1968, was posed. It was pointed out that such a legal status could only be acquired after deposit of the fifth instrument of acceptance by a contracting state. Since it is most unlikely that this could be done by 1st July, 1968, the proposed activities of the Regional Centre may be adversely affected. It was agreed that this matter be tabled at the SEAMEC Meeting. Further the Committee suggested that alternative measures, such as a legal status of the Regional Centre given by the Malaysian Government or steps taken by the Regional Centres at Bangkok or at Los Banos, be looked into.

-----00000 ANNEXURES 00000 -----

AGENDA FOR
THE SECOND MEETING OF THE STEERING COMMITTEE
OF THE REGIONAL CENTRE FOR EDUCATION IN SCIENCE
AND MATHEMATICS TO BE HELD IN INDONESIA
FROM OCTOBER 16 - 19

ANNEXURE 1

1. Opening Ceremony.
2. Chairman's Address.
3. To receive SEAMES/P5/SCMS/4 Report of the First Meeting of the Steering Committee for the Regional Centre for Education in Science and Mathematics held from 23rd - 25th May, 1967.
4. Matters Arising.
5. Budget for Interim Phase and Financial Position as at 30th September, 1967.
6. Appointment of Interim Project Office Staff.
7. Appointment of Programme Co-ordinator and Terms of Appointment.
8. To receive the following Reports:
 - (a) Report of the First Meeting of the Task Force held in Singapore from 26th - 27th June, 1967.
 - (b) Reports of National Seminars in Science and Mathematics (July - August 1967).
 - (c) Report of Regional Seminar in Science and Mathematics held in Penang from 12th - 14th September, 1967.
 - (d) Report of the Second Meeting of the Task Force held in Penang from 15th - 18th September, 1967.
9. To consider the Draft Development Plans (or Plan of Operations for the Regional Centre, as recommended by the Task Force at its Second Meeting held in Penang from 15th - 18th September, 1967.)
10. To review the Schedule of Activities of the Pre-Project Period July - December 1967 and to consider the Need and the Budget Provision for extending the Pre-Project Phase.
11. To consider problems related to the legalising of the Regional Centre and its relationship with Host Country, Member Countries and Donor Countries.
12. To consider job descriptions of Director and Deputy Director and staffing required for the Regional Centre.
13. To consider Funding Scheme for the Regional Centre.
14. Future Meeting of the Steering Committee.
15. General.
16. Press Communiqué.

GENERAL PROGRAMME

Sunday 15.10.67:

2.20 p.m.

Arrival of Delegates at Djakarta by air.
Transport to Savoy Homann Hotel, Bandung,
by chartered bus.

Monday 16.10.67:

9.30 a.m.

- (i) Arrival of guests for Opening Ceremony at the Institute of Technology, Bandung.
- (ii) Registration of delegates and distribution of documents.

10.00 a.m.

Opening Ceremony:

- (i) Welcome Speech by the Rector of the Institute of Technology, Bandung.
- (ii) Address by Mr. Sujono Kromodimuljo, Secretary, National CoOrdinating Committee, SEAMES.
- (iii) Welcome Address and Progress Report. by Mr. Chang Min Kee, Chairman of the Steering Committee.
- (iv) Address by Mr. Thavisakdi Srimuang, Executive Secretary, representing SEAMES Director.
- (v) Address by the Secretary-General, Dr. Soemantri Hardjoprakoso, representing the Hon'able Minister for Education and Culture, Indonesia.

10.45 a.m.

Light Refreshments.

11.30 a.m.

First Plenary Session:

- (i) Adoption of Agenda and Programme for the Meeting.
- (ii) Progress Report by the Programme Co-ordinator, Mr. C. Ganasalingam.
- (iii) Progress Report by Mr. T.B. Slattey, U.S. AID Consultant to the Regional Centre.
- (iv) Adoption of the Report of the First Meeting of the Steering Committee held in Penang, 23 - 25 May, 1967, Ref. SEAMES/P5/SCMS/4.
- (v) Matters Arising.

Monday 16.10.67: (Contd.)

12.30 p.m.	Break for lunch.
2.00 - 5.00 p.m.	Second Plenary Session.
7.45 p.m.	Cocktail Party by the Secretary-General, Dr. Soemantri Hardjoprakoso, representing the Hon'ble Minister for Education and Culture, Indonesia.

Tuesday 17.10.67:

8.30 - 12.30 p.m.	Third Plenary Session.
12.30 p.m.	Break for lunch.
2.00 - 5.00 p.m.	Fourth Plenary Session.

Wednesday 18.10.67:

8.20 - 12.30 p.m.	Fifth Plenary Session.
12.30 p.m.	Break for lunch.
2.00 - 5.00 p.m.	Sixth Plenary Session or Preparation of Report.

Thursday 19.10.67:

7.00 - 12.30 p.m.	Field Trip Preparation of Final Report.
12.30 p.m.	Break for lunch.
2.30 - 5.00 p.m.	Adoption of Final Report Press Communiqué Closing Ceremony.

Friday 20.10.67:

7.00 a.m.	Return to Djakarta by chartered bus en route to home destination.
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ANNEXURE: 3

ITEM NO.4

MEETING: 16.10.67.

MATTERS ARISING

SUMMARY OF DECISIONS OF THE FIRST MEETING OF
THE STEERING COMMITTEE HELD ON 23 - 25 MAY 1967

(a) ITEM 4: TENTATIVE PLAN OF OPERATION OF ACTIVITIES AND
PROJECTS FOR THE REGIONAL CENTRE:

- (a) That as regards the activities and projects for the Regional Centre a Plan of Operation should be drawn up with the help of Consultants before the Second Meeting of the Steering Committee.
- (b) That in view of the Interim SEAMES Director's suggestion pertaining to the objectives of the Project, the objectives as spelled out on Page 49, Para. 4 in SEAMESO/8 should read:
"The objectives of the Regional Centre will be to help the participating countries in improving the teaching of Science and Mathematics in the Region in order that technically and scientifically trained manpower requirements of the region will be adequately met. It is proposed to start initially at the elementary and secondary levels and to involve teacher training institutions and Colleges of Education, Faculties of Mathematics and Science and other faculties as may be necessary in implementing the programmes".

(b) ITEM 5: PROPOSALS AND BUDGET ESTIMATES FOR PERIOD MAY TO
DECEMBER 1967:

(a) Budget Proposal:

The Budget Proposal pertaining to the First Meeting of the Steering Committee was adopted.

(b) Task Force:

A Task Force of five educators (including one for Elementary Science Education) and one Administrator instead of four as suggested in Para. 3.10 (a) of Proposal 3 together with consultant(s) should be formed with the following terms of reference:

1. To prepare guide-lines for National Seminars;

- 2 -

2. To help plan and organise Regional Seminars;
3. To identify the needs and resources of the Region in respect of each discipline;
4. To assist the Programme Co-ordinator in preparing a draft Plan of Operation for the Regional Centre for submission to the Second Meeting of the Steering Committee;
5. To draw up an inventory of Science and Mathematics equipment and instructional materials required by the Centre.

The Task Force would comprise:-

1. A Physicist from Indonesia,
2. An Administrator from Malaysia,
3. A Biologist from the Republic of the Philippines,
4. An Elementary Science Expert from Singapore,
5. A Chemist from Thailand,
6. A Mathematician from Vietnam,

all of whom must have experience in the field of teaching.

This Task Force should be convened for the first time on 26th and 27th June, 1967, in Singapore. In preparing the guide-lines, the Task Force might request the assistance of the Malaysian National Co-ordinating Committee.

A National Co-ordinating Committee in each member country should be formed.

National Seminars should be convened before August 15, 1967.

A Regional Seminar would be held in Penang during the period 13th - 16th September, 1967. There would be five representatives from each country. Members of the Task Force would be included in the delegations of their respective countries and would stay on for another two working days to prepare the Plan of Operation.

(c) Programme Co-ordinator:

A Programme Co-ordinator for the Centre should be appointed during the interim period on a temporary basis until the appointment of a Director after which the position of the Programme Co-ordinator would have to be reviewed.

The salary of the Programme Co-ordinator would not be based on any international salary scale but it would be on a scale operational in the host country.

The Programme Co-ordinator would be assisted by a staff comprising: one secretary, one administrative assistant, two clerk-typists and one office boy.

The functions of the Programme Co-ordinator, after some amendments to para. 2.4 of the Working Paper, would include:

1. To co-ordinate planning for the development of the permanent staff, buildings and programming of the Centre. In this connection he will work closely with National Co-ordinating Committees and the Task Force.
2. To collect curriculum resource materials in Science and Mathematics from selected countries.
3. To survey and collect curriculum material, text-books, syllabus material, and locally made laboratory apparatus from countries of the region for purposes of study and comparison.
4. To develop a regional science and mathematics education newsletter and to promote the circulation of information on the Regional Centre, its potential capabilities and planned services to relevant departments, institutions, organisations and leaders in member countries.
5. To organise with the assistance of the Task Force, National and Regional Seminars.
6. To receive programme proposals and to prepare them for presentation to and evaluation by the Steering Committee.

7. To arrange for the use of facilities in the Malaysian institutions in Penang, particularly the Malayan Teachers' College at Bukit Glugor, the Technical Institute, the Fishery Research Institute and related educational and research institutions as required.
8. To arrange for periodic meetings of the Steering Committee and to keep its members informed of substantive developments in connection with the Centre. To perform the same function for SEAMES and the agencies which provide financial support for the Centre.
9. To keep in touch with Government-agencies, international organisations and foundations as well as professional Science and Mathematics Societies, Science Teacher Associations with a view to promoting greater interest in the work of the Regional Centre.

(d) Appointment of Director and Deputy Director:

- (i) The functions of the Director should include among others the following:

1. To direct the activities of the Centre in implementing its objectives;
2. To work closely with SEAMES in raising funds for the Regional Centre;

- (ii) The Programme Co-ordinator should be entrusted with the task of preparing a job-description for the post of the Director and this is to be circulated to member countries requesting nominations;

- (iii) The selection of the Director would be made by the Steering Committee at its Second Meeting.

(c) ITEM 6: PROFESSIONAL DIVISIONS OF THE REGIONAL CENTRE:

- (a) A division for Elementary Science Education would be provided in the Regional Centre;
- (b) Earth and Space Science and Experimental Psychology would be considered at a later stage.

(d) ITEM 7: LIST OF SCIENCE AND MATHEMATICS EQUIPMENT AND INSTRUCTIONAL MATERIALS NEEDED:

The Task Force would be responsible for examining the inventory lists submitted by National Co-ordinating Committees and for preparing a new list. The lists submitted by the Malaysian National Co-ordinating Committee (P/5/SCMS 3/1) would be used as a guide.

(e) ITEM 8: MEASURES FOR FINANCING ACTIVITIES:

(a) SEAMES would provide the Steering Committee with general guide-lines as to the funding of the Centre.

(b) The Programme Co-ordinator in collaboration with the Chairman of the Steering Committee and SEAMES would undertake to prepare a funding scheme for the Regional Centre.

(f) ITEM 9: PROBLEMS OF LEGALISING THE REGIONAL CENTRE:

SEAMES will be entrusted with the preparation of a draft model agreement which should be flexible enough to accommodate the conditions which might be laid down by the host countries and the particular needs of the individual projects. This draft model should be transmitted to all member countries for study before the Second Meeting of the Steering Committee.

(g) ITEM 10: PLAN OF ACTION FOR THE INTERIM PHASE, DATE AND VENUE OF SECOND MEETING:

(a) That the meeting of the Task Force be held in Singapore from 26th to 27th June, 1967.

(b) That the National Seminars be held before 15th August, 1967.

(c) That the Regional Seminar be held in Penang from 13th to 16th September 1967. The members of the Task Force attending this Regional Seminar should stay on for another two working days to prepare the draft Plan of Operation for submission to the Second Meeting of the Steering Committee.

(d) That the Second Meeting of the Steering Committee be held in Indonesia from 16th to 18th October, 1967.

(h) ITEM 11: FINAL PROPOSALS AND BUDGET ESTIMATES FOR THE REGIONAL CENTRE FOR THE INTERIM PHASE - MAY TO DECEMBER, 1967:

SUMMARY OF FINAL PROPOSALS:

<u>Proposal No.</u>	<u>Title of Proposal</u>	<u>Estimated</u>
1.	First Meeting of Steering Committee	\$3,479.00
2.	External Consultants, Programme Co-ordinator and Supporting Staff	25,788.00
3.	Task Force	1,900.00
4.	Regional and National Seminars	16,316.00
5.	Architectural Studies	20,000.00
6.	Second Meeting of the Steering Committee	4,940.00
TOTAL:		\$72,423.00 =====

(i) ITEM 12: GENERAL:

Under this item the Philippine delegation brought up the question of the effective date of the nominations of members of the Steering Committee. The Singapore delegation then inquired as to the terms of tenure of the members. Official letters of appointment of the members to the Steering Committee have not been issued, but the meeting was informed that before long these letters of appointment would be sent by the President of SEAMEC.

Annexure: 4

ITEM NO. 5

The Financial Procedure Ordinance, 1957.
Direction under Section 9 (3)

"Donations to SEAMES Regional Centre for Education in
Science and Mathematics in Penang Trust Account"

1. This direction is deemed to have effect from the first day of July, 1967.
2. There shall be established a Trust Account within the Consolidated Fund to be known as "Donations to SEAMES Regional Centre for Education in Science and Mathematics in Penang Trust Account" hereinafter referred to as the Account.
3. The purpose of the Account is to finance the following project development activities budgeted and approved by the Steering Committee of the Regional Centre or for purposes which might be agreed upon by the parties referred to in the letter of agreement dated 30th June, 1967, at Appendix 'A'.

(a) Interim Project Office Costs:

- (i) Salaries;
- (ii) Office equipment;
- (iii) Supplies, postage, telephone, cables, etc.;
- (iv) Alterations to premises;
- (v) Travel and per diem;
- (vi) External consultants;
- (vii) Contingency.

(b) National and Regional Seminars for member countries;

(c) Architectural Studies;

(d) Second Meeting of Steering Committee.

4. The Account shall be controlled by the Assistant Adviser (Teachers) in his capacity as Chairman of the Steering Committee of the Regional Centre, and operated by the Chief Accountant, Ministry of Education, Malaysia.
5. The Assistant Adviser (Teachers) in his capacity as Chairman of the Steering Committee shall comply with the provisions of the Financial General Orders, Treasury Instructions and any financial regulations made or issued under the Financial Procedure Ordinance, 1957 from time to time. Where it is not possible nor practicable to do so in view of the urgent need to expend the funds by 31st December, 1967, to implement the project development activities as contained in the approved budget, or for purposes which might be agreed upon by the parties referred to in the letter of agreement at Appendix 'A', the Chairman may exercise his discretion in deciding on the expenditure.
6. The Account shall be operated in accordance with the provisions of the terms as set out in the letter of agreement at Appendix 'A' as follows:
 - (a) International air travel to the maximum extent possible will be performed on U.S. airlines;
 - (b) Procurement of equipment supplies and services in the approved budget will be from U.S. sources to the maximum extent practicable;
 - (c) These funds will be maintained in an identifiable account and will be subject to review upon request by only accredited officers of the United States Government;
 - (d) Travel and per diem will be at rates per diem as approved by the United States Government.
7. The Account shall be credited with the sum of M\$145,915.88 the equivalent of US\$50,000/- being the initial grant received from the United States Government. Other sums of grants received from time to time from the United States Government and other sources shall also be paid into this account.
8. All monies received in paragraph 7 hereinabove provided shall be paid into the Bank Negara, Kuala Lumpur, or Penang, to the credit of the Chief Accountant, Ministry of Education, for the credit of the Account.
9. Only expenditure for the purpose of carrying out the project activities of the SEAMES Regional Centre for Education in Science and Mathematics, established at Penang, as approved by the Steering Committee of the Regional Centre, shall be charged to the Account.
10. The Account shall be at all times kept in credit and may not be overdrawn.

11. At the expiration of the term of the Letter of agreement between the United States Government and the Ministry of Education as in paragraph 5 above, the Assistant Adviser (Teachers), Ministry of Education, in his capacity as Chairman of the Steering Committee, shall forward a statement in duplicate to the Permanent Secretary to the Treasury, showing receipts and payments and closing balance of the amount for the period under review, which shall be examined by the Auditor-General.
12. In accordance with paragraph 3 of the letter of agreement at Appendix 'A', the Assistant Adviser (Teachers) shall forward an audited statement of the disbursements to the American Embassy, Kuala Lumpur, and refund the balance, if any, in the Account to the same Embassy.

sgd.
b.p. Permanent Secretary to
the Treasury.

The Treasury,
Kuala Lumpur.

17th August, 1967.

APPENDIX 'A'

June 30, 1967.

The Honorable Enche Khir Johari,
Minister of Education,
Federal House,
Kuala Lumpur.

Dear Mr. Minister:

I am pleased to advise you that pursuant to the recommendations of the SEAMES Steering Committee for a proposed Regional Centre for Education in Science and Mathematics which met in Penang, Malaysia, May 23 - 25, the United States Government hereby agrees to provide up to US\$50,000 in support of the SEAMES Interim Science and Mathematics Project Office in Penang and its activities until December 31, 1967.

It is understood that these funds will be used to finance the activities of the Interim Project Office as agreed upon at Penang and outlined in the attached Scope of Work. As agreed at Penang, the Interim Project Office will be established at the Malayan Teachers' College there. It will be staffed by Malaysians and will have responsibility for implementing the project development activities approved by the Steering Committee and work under the general guidance of the Steering Committee. The Malaysian National Coordinating Committee will also work closely with the Interim Project Office. Office space, maintenance and overhead will be supplied without charge by the Malayan Teachers' College. It is also understood that the Ministry of Education will disburse, on behalf of SEAMES, the funds granted herewith in accordance with the attached Budget.

It is further agreed that international air travel, to the maximum extent possible, will be performed on U.S. airlines. It is also agreed that procurement of equipment, supplies and services in the attached Budget will be from United States sources to the maximum extent practicable. It is further agreed that these funds will be maintained in an identifiable account and will be subject to review upon request by duly accredited officers of the United States Government. At the expiration of the term of this letter of agreement a report on the disbursements will be submitted to the American Embassy, Kuala Lumpur. All funds unused for the purposes enumerated in the Budget or for purposes which might be agreed upon by the two parties will be returned to the United States Government together with a report of the disbursements.

This letter and your acceptance of its terms in writing will be the basis for a transfer of funds as soon as practicable.

Sincerely yours,

sgd.
James Dunbar Bell
Ambassador

Enclosures: Scope of Work
Budget

Accepted by: Sgd.

Date: 30.6.67.

c.c. Tan Sri Mohd. Shariff bin Abdul Samad,
Secretary to the Treasury Office,
Ministry of Finance.

Enche Thong Yaw Hong,
Deputy Secretary,
Economic Planning Unit.

Budget

The following budget for the project development work from July 1 to December 31, 1967, was approved by the Steering Committee at Penang:

A) Interim Project Office costs

1) Salaries	US\$10,150
2) Office equipment	1,638
3) Supplies, postage, telephone, cables, etc.	1,000
4) Alteration to premises	1,000
5) Travel and per diem	1,000
6) External consultant (four months)	10,000
7) Contingency	1,000

Total Interim Project Office cost , \$25,788

B) National and Regional Seminars

1) National (7 seminars @ \$1,000 each)	7,000	
2) Regional Seminar		
a) Travel and per diem 35 delegates	9,442	
b) Supporting services	588	17,000

C) Architectural studies (to be funded later)

D) Second Meeting Steering Committee

1) Travel and per diem	4,500
2) Supporting Services	500

Total SC meeting 5,000

Total costs project development US\$47,788

FINANCIAL POSITION OF INTERIM PROJECT OFFICE
AS AT 10TH OCTOBER 1967.

Summary of Expenditure in Malaysian Dollars

A. Interim Project Office Costs

(1) Salaries		\$ 4,295.69
(2) Office Equipment		7,360.25
(3) Supplies, postage, tel., cables etc.		2,096.10
(4) Alteration to premises		1,430.00
(5) Travel & Per Diem		2,355.22
(6) External Consultant (4 months)		-
(7) Contingency		<u>1,582.46</u>

Total Interim Project Office Costs

\$19,119.72

B. National & Regional Seminars

(1) National Seminars		\$21,840.30
(2) Regional Seminars		
(a) Travel & Per Diem	\$23,878.00	
(b) Supporting Services	<u>4,984.90</u>	<u>28,862.90</u>

Total National & Regional Seminars

\$50,703.20

C. Architectural Studies (to be funded later)

D. Second Meeting of Steering Committee - Bandung.

(1) Travel & Per Diem	\$19,225.00
(2) Supporting Services	<u>3,000.00</u>

Total Second Meeting of Steering Committee

\$22,225.00

Total - \$92,047.92

STATEMENT

Received from U.S.A. Sources
US.\$50,000 = M.\$145,915.82

As per expenditure above = M.\$ 92,047.92

Balance in Trust Account = M.\$ 53,867.90

= US.\$ 17,822.63

Annexure: 5

Item 6

INTERIM PROJECT OFFICE STAFF

<u>Name</u>	<u>Particulars</u>	<u>Date of Appointment</u>	<u>SALARIES</u>	
			<u>Budget</u> US \$	<u>Actual</u> US \$
1. Mr. Ooi Boon Lay	Office Assistant Retired Financial Assistant of State P.W.D. 30 years' experience as a clerk and office Assistant.	23rd Aug. 1967	\$350	\$350
2. Miss Tan Chui Tieh	Typist/Clerk More than 15 years' experience as Personal Secretary to Company Director.	7th Sept. 1967	\$150	\$150
3. Miss Ho Juan Ngan	Typist/Clerk One year experience as temporary typist with Malayan Teachers College, Penang.	16th Aug. 1967	\$150	\$66.67
4. Miss Sakinajan bte Nyak Hassan	Typist/Clerk	23rd Aug. 1967	\$150	\$60.00
5. Mr. Chin Lye Hock	Office-keeper Duplicating Machine operator 5 years' experience as office boy with Malayan Teachers' College, Penang.	5th July 1967	\$ 50	\$46.67

TERMS OF APPOINTMENT TO BE OFFERED TO
MR. C. GANASALINGAM, PROGRAMME CO-ORDINATOR
(Ref.K.P.Sulit 027/115/(216))

"(a) Period of Secondment:

With effect from 1hb. Ogos, 1967, up to 31hb Disember, 1967, but Government reserves the right to determine the termination of the secondment at any time;

(b) Salary and Allowances:

Payment of his salary and other allowances normally payable to him in his parent service will not be met by the Government but while on secondment Enche C. Ganasalingam will be paid salary and allowances (including economic rental at \$350/- per month, if applicable) by SEAMES on terms not less favourable than what he is paid in his parent service;

(c) That during the period of his secondment, he will continue to be governed by General Orders, Financial General Orders, Federal Government Circulars and rulings as enforced from time to time;

(d) That in the event of his reverting to his substantive appointment, he will draw the appropriate salary he would have drawn had he not been seconded;

(e) That he retains his pension rights, if any, during the period of secondment and would, if he retires for reasons of ill-health, be regarded as being pensionable in his own substantive salary;

(f) That in the event of permanent injury sustained as a direct result of an injury received in the actual discharge of his duties while on secondment to the service of the SEAMES for the Regional Centre for Education in Science and Mathematics, SEAMES shall undertake to pay the Central Government of Malaysia a sum equal to the amount for which the Central Government of Malaysia may be liable under the provisions of Pension Regulation 19 of the Pension Regulations 1957 made under the Pension Ordinance, 1951, of the Federation of Malaya or under the provisions of the Workmen's Compensation Ordinance, 1952;

- (h) That in the event of death as a direct result of an injury sustained in the circumstances described in (g) above, SEAMES for the Regional Centre for Education in Science and Mathematics shall undertake to pay the Central Government of Malaysia a sum equal to the amount for which the Central Government of Malaysia may be liable under the provisions of Pension Regulation 20 of the Pension Regulations 1957 made under the Pension Ordinance, 1951, of the Federation of Malaya or under the provisions of the Workmen's Compensation Ordinance, 1952;
- (i) That for the purpose of the pension rights of the seconded officer, SEAMES for the Regional Centre for Education in Science and Mathematics will pay to the Central Government of Malaysia an annual pension contribution at the rate of 25% of the seconded officer's total pensionable emoluments of the officer payable during the year;
- (j) That the contribution should be paid annually to the Accountant General Malaysia, Kuala Lumpur, to be credited to Revenue Class II, item 68(iii) in the Federal Estimates, 1967, on a corresponding item in the Estimates, of any succeeding year during which the officer is on secondment."

RELATION OF THE REGIONAL CENTER TO OTHER RESEARCH AND
TRAINING EFFORTS IN SCIENCE AND MATHEMATICS

GUIDELINES

1. The Center intends to be responsible to the educational needs of the SEAMES region.
2. The Center will avoid duplicating efforts considered to be more effectively undertaken by other agencies both within the region and without.
3. The Center will train only key personnel of countries involved.
4. The Center will seek to co-operate with national and international association of scientists, mathematicians and educators in furthering their mutual objectives.
5. The Center will not engage in fundamental research in science and mathematics.
6. It is assumed that the countries will send to the Center only teachers who have competence in their respective subject areas. The Center will not engage in teaching basic subject courses which is the responsibility of the universities/colleges.

SEAMES REGIONAL CENTRE FOR EDUCATION
IN SCIENCE AND MATHEMATICS

VII. BUDGET FOR EXTENSION OF INTERIM PHASE TO JUNE 1968.

A. Pre-Project Activities:

1. The Steering Committee of the Regional Centre for Education in Science and Mathematics at its second meeting held at Bandung, Indonesia, in October 16 - 19, 1967, requested an extension of the present interim phase, which ends on 31st December, 1967 to 30th June, 1968.
2. This extension is sought by the Steering Committee and the Interim Project Office to carry out the following pre-project activities.
 - (a) to make further refinements to the Draft Development Plan and to work out the details of the specific project proposals in the Plan.
 - (b) to carry out the Architectural and Engineering (A & E) Studies for the Regional Centre based on the Draft Development Plan.
 - (c) to conduct the recruitment exercise for the Director and Deputy Director for the Regional Centre on the lines indicated in the Plan.
 - (d) to organize National Seminars on the development and evaluation of prototype equipment, apparatus and teaching aids for Mathematics and Science.
 - (e) to publicise the proposed activities of the Regional Centre to interested donor countries, Foundations and educational agencies with a view to seeking support for the centre.

B. Budget Proposals:

1. In order to carry out the above proposed activities, the following budget proposals are planned:

I. SALARIES:

(i) <u>Interim Project Co-ordinator</u>	600 x 6	\$3,600
(a) Economic rental on house occupied by Project Co-ordinator payable to Malaysian Government.	$\frac{350}{3} \times 6$	700
(b) Pension contribution to Malaysian Government.	$25\% \text{ of } \frac{1360}{3} \times 6$	680
(c) Inducement allowance	60 x 6	<u>360</u>
		\$ 5,340

(ii) <u>Administrative Assistant</u> (no change)	350 x 6	\$2,100	\$ 2,100
(iii) <u>Secretary</u> Current rates for a competent person.	180 x 6	<u>1,080</u>	1,080
(iv) <u>3 Clerks-Typists</u> An extra clerk is needed to cope with the increase in typing at the office.	150 x 3 x 6	<u>2,700</u>	2,700
(v) <u>2 Office Keepers/Duplicating Machine Operators (Office Boy)</u> An extra office keeper is needed to assist the present person to operate duplicating machine, clean up office and attend to the increase of work.	50 x 2 x 6	<u>600</u>	600
(vi) <u>Information Officer</u> This is a new post and the officer is needed to take charge of the Interim Project Information Office. A vast amount of clearing and exchange of information on developments in Science and Math education has to be carried out within the region.	500 x 6	<u>3,000</u>	3,000
(vii) <u>Cataloguing Assistant</u> This is a new post. The holder would be assisting the Information Officer.	100 x 6	<u>600</u>	600
			<u>\$15,420</u> =====

II. OFFICE EQUIPMENT:

(a) One Thermofax Copier needed for copy work in the Information Centre.		\$1,200	
(b) One <u>Electric typewriter</u> needed for the greater volume of typing required in information exchange.		<u>500</u>	\$1,700 =====

III. ADDITIONAL OFFICE SPACE:

This would be provided by the Malayan Teachers' College to house the Information Centre (printing section) and office for the Information Officer.

(a) Alterations	800	
(b) Furniture	<u>500</u>	\$1,300 =====

IV. SUPPLIES:

Stationery and stencils (based on
1st phase IPO spent \$1,200 for four
months)

2,500 \$2,500
=====

V. OPERATIONAL EXPENSES:

- (a) Postage @ \$250 x 6 months
- (b) Telephone and Telegrams
- (c) Electricity, lighting and
air-conditioning
- (d) Overtime Allowances to typists
and office keepers for work done
during rush periods.
- (e) Contingencies

1,500
900
1,500

1,000

2,000 6,900
=====

VI. TRAVEL AND PER DIEM FOR PROGRAMME
COORDINATOR AND TASK FORCE

(a) Programme Coordinator:

- (i) Travel to Bangkok to attend
National Seminar on Improvised
Science teaching materials; and
Bangkok to attend meeting at
SEANES office: 2 x 110 = 220
per diem. 10 x 18 = 180
- (ii) Travel to Saigon to attend
National Seminar on Improvised
Science teaching materials
1 x 150 = 150
5 x 16 = 80
- (iii) Travel to Manila to attend
National Seminar on Improvised
Science teaching materials.
1 x 300 = 300
5 x 18 = 90
- (iv) Travel to Singapore to attend
National Seminar on Improvised
Science teaching materials.
1 x 60 = 60
5 x 22 = 110
- (v) Travel to Jakarta to attend
National Seminar on improvised
Science teaching materials.
1 x 180 = 180
5 x 24 = 120
- (vi) Travel to Colombo to visit
Science Teaching Centre and
UNESCO Science Centre and discuss
with officials regarding project
activities. 1 x 240 = 240
10 x 20 = 200

1,930

(b) Task Force:

Meeting of Task Force members at the Centre in Penang January 1968 to discuss and refine the Development Plan.

Per diem, 6 members @ 16x7x6 = 672
Travel, 6 members = 898

1,570 3,500
=====

VII. STEERING COMMITTEE MEETING:

At Manila in May 1968 1 x 6,000 = 6,000

6,000 6,000
=====

VIII. NATIONAL SEMINARS ON THE DESIGN AND CONSTRUCTION OF PROTOTYPE IMPROVISED SCIENCE AND MATHEMATICS TEACHING EQUIPMENT.

(a) Grants to each National Organising Committee 6 x 1,000

6,000

(b) Transport expenses for prototype exhibits to be brought to the Centre.

500 6,500
=====

IX. INFORMATION CENTRE:

(a) Printing of 4 newsletters 1,00 copies each @ \$300 per issue for a wider circulation within the region.

1,200

(b) Printing of the revised editions of National and Regional Seminars held in 1967 with possible sales to contributors from outside the region; 1,00 copies each of six National Seminar Reports @ \$400
1,000 copies of Regional Seminar Reports.

2,400

600 4,200
=====

X. U.S./AID CONSULTANT TO THE INTERIM PROJECT OFFICE:

Salary 2,000 x 6
Travel and per diem

12,000
6,000 18,700
=====

XI. Architectural and Engineering Studies:

1. In the Budget Proposals for the First Interim Phase (June-December 1967), there was no provision for Architectural and Engineering Studies because it was agreed that the building programme for the Regional Centre should be planned only when the Plan of Operations for the first five years has been drawn up and approved for the Regional Centre. The preliminary Draft Development Plan has now been approved by the Steering Committee in October, 1967 for presentation to the Third Conference for the Southeast Asian Ministers of Education in December, 1967.

2. Proposals for Architectural and Engineering Studies:

2.1 The Interim Project Office has held discussions with the architects and engineers in the Public Works Department, Penang, Malaysia, on the accommodation requirements based on the specific proposals in the Draft Development Plan. As a result of these discussions, two sets of preliminary plans have been prepared:

(a) Master Plan showing the site plan and the proposed building projects.

(b) Hostel Plan showing a typical module.

2.2 Two proposals have been put forward:

(a) PROPOSAL A: Costing US\$315,000.

This proposal is based on the assumption (i) that the Public Works Department, Penang, will be called upon to assist in the Architectural and Engineering Studies for the First Hostel Block as this block will be urgently required to start the operational phase in the first year of operations, and (ii) all the remaining building projects will be undertaken by U.S. firm of consultants, architects and engineers.

The break-down details are as follows:

a. By Public Works Department, Penang:

<u>Building</u>	<u>Estimated Cost</u>	<u>Estimated A.&E. Study</u>	<u>Remarks</u>
i. First Hostel Block	\$250,000 @ 6%	\$15,000	--

b. By U.S. Firm of Consultants, etc.:

<u>Building</u>	<u>Estimated Cost</u>	<u>Estimated A.&E. Study</u>	<u>Remarks</u>
i. Temporary Class Room Block	147,000		To be converted later into Dining Hall
ii. Admin. & Teaching Block	495,000		
iii. 2nd & 3rd Hostel Block	500,000		
iv. Laboratory Block	232,000		
v. 2nd Teach- ing Block	185,000		
vi. 4th Hostel Block	250,000		
vii. Staff Housing	765,000		
viii. Road Work, etc.	260,000		

$\$2,834,000 @ 10\% = \$283,400$

c. Supervision fees
(estimate)

16,600

TOTAL COST	\$315,000
A. & E. STUDY	=====

(b) PROPOSAL B: Costing US\$71,000.

This proposal is based on the assumption that the Public Works Department, Penang, will be invited to carry out the Architectural and Engineering Study of the entire building programme and supervise the complete construction of the buildings, earthworks, roads and landscaping. The Public Works Department will, however, require the assistance of consultant, architects and engineers from US/AID for at least 4 months, and local supporting services to assist in supervising the building construction.

The break-down costs are given below:

(1)	Consultant Architect	4 x \$2,000	= \$ 8,000
(2)	Consultant Engineer	4 x \$2,000	= 8,000
(3)	Travel and per diem for the above consultants	2 x \$5,000	= 10,000
(4)	Cost of supporting services given by the State Public Works Department		45,000
TOTAL			US\$71,000
			=====

Decision:

The Steering Committee of the Regional Centre recommends Proposal B.

SUMMARY:

I. Salaries	\$ 15,420
II. Office Equipment	1,700
III. Additional Office Space	1,300
IV. Supplies (Stationery, stencils)	2,500
V. Operational Expenses	6,900
VI. Travel and Per Diem for Programme Co-ordinator and Task Force	3,500
VII. Steering Committee Meeting	6,000
VIII. National Seminars	6,500
IX. Information Centre	4,200
X. U.S. AID Consultant	18,700
Total of Items I - X	<u>\$66,720</u> =====

GRAND TOTAL

Item I - X	\$ 66,720	66,720
XI (a)	<u>315,000</u>	<u>(b) 71,000</u>
	US\$381,720	US\$137,720
	=====	=====

Recommendation

The Steering Committee at its Second Meeting held at Bandung, Indonesia October 16 - 19 1967, recommends the budget proposal of US\$137,720 and requests the funding of this amount from U.S.G. sources, so as to enable the Interim Project Office to carry out its extended phase of **intrin** project activities up to 30th June, 1968.

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Annexure 9
Item II
Meeting: 16.10.67.

Draft

AGREEMENT
BETWEEN

THE GOVERNMENT OF MALAYSIA

AND

THE SOUTHEAST ASIAN MINISTERS OF EDUCATION ORGANIZATION
REGARDING THE REGIONAL CENTRE FOR
EDUCATION IN SCIENCE AND MATHEMATICS

THE GOVERNMENT OF MALAYSIA AND THE SOUTHEAST
ASIAN MINISTERS OF EDUCATION ORGANIZATION

DESIRING to conclude an agreement regarding the Regional Centre for
Education in Science and Mathematics.

HAVE AGREED as follows:

ARTICLE I

Definitions

Section 1

In this Agreement:

- (a) the expression "Organisation" means the Southeast Asian Ministers of Education Organisation;
- (b) the expression "Regional Centre" means the Regional Centre for Education in Science and Mathematics;
- (c) the expression "The Government" means the Government of Malaysia;
- (d) the expression "Director" means the Director of the Southeast Asian Ministers of Education Secretariat, and during his absence from duty the officer designated by him to act on his behalf;
- (e) the expression "Centre Director" means the Centre Director of the Regional Centre, and in his absence, his duly authorised Deputy;

- (f) the expression "appropriate Malaysian Authorities" means such national or other authorities of Malaysia as may be appropriate in the context and in accordance with the laws and customs applicable in Malaysia.
- (g) the expression "laws of Malaysia" includes legislative acts and decrees, regulations or orders, issued by or under authority of the Government or appropriate Malaysian authorities;
- (h) the expression "Member State" means a nation which is a Member of the Organisation;
- (i) the expression "Representative of Member States" includes all representatives, alternates, advisers and technical experts and secretaries of delegations;
- (j) the expression "meetings convened by the Organisation" means meetings of the Council of the Organisation, any international conference or other gathering convened by the Organisation and any commission, committee or sub-group of any of these bodies;
- (k) the expression "Regional Centre Seat" means the premises occupied by the Regional Centre;
- (l) the expression "archives of the Organisation" includes records and correspondence, documents, manuscripts, still and moving pictures and films, and sound recordings belonging to or held by the Organisation;
- (m) the expression "Officers of the Organisation" means all ranks of the Organisation other than manual workers locally recruited;
- (n) the expression "property" as used in Article VIII, means all property, including funds and assets, belonging to the Organisation or held or administered by the Organisation in furtherance of its constitutional functions, and all income of the Organisation.

ARTICLE II

Juridical Personality

The Government recognizes the juridical personality of the Organisation and the Organisation shall have the capacity:

- (a) to contract;
- (b) to acquire and dispose of movable and immovable property;
- (c) to institute legal proceedings.

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2. The Government recognises the right of the Organisation to convene meetings within the Regional Centre Seat, or with the concurrence of the appropriate Malaysian authorities, elsewhere in Malaysia. At meetings convened by the Organisation, the Government shall take all proper steps to ensure that no impediment is placed in the way of full freedom of discussion and decision.

ARTICLE III

The Regional Centre Seat

The Government shall provide for the Regional Centre _____

ARTICLE IV

Inviolability of the Regional Centre Seat

1. The Government recognises the inviolability of the Regional Centre Seat which shall be under the control and authority of the Organisation, as provided in this Agreement.
2. No officer or official of the Government, whether administrative, judicial, military or police, shall enter the Regional Centre Seat to perform any official duties therein except with the consent of, and under conditions agreed to by the Director or the Centre Director.
3. Without prejudice to the provisions of Article X, the Organisation shall prevent the Regional Centre Seat from being used as a refuge by persons who are avoiding arrest under any law of Malaysia or who are required by the Government for extradition to another country, or who are endeavouring to avoid service of legal process or judicial proceedings.

ARTICLE V

Protection of the Regional Centre Seat

1. The appropriate Malaysian authorities shall exercise due diligence to ensure that the tranquillity of the Regional Centre Seat is not disturbed by any person or group of persons attempting unauthorized entry or creating disturbances in the immediate vicinity of the Regional Centre Seat.
2. If so requested by the Project Director, the appropriate Malaysian authorities shall provide a sufficient number of police for the preservation of law and order in the Regional Centre Seat and for the removal therefrom of offenders.

ARTICLE VI

Public Services

1. The appropriate Malaysian authorities shall exercise, to the extent requested by the Director or the Project Director their respective powers to ensure that the Regional Centre Seat shall be supplied with the necessary public services, including, without limitation by reason of this enumeration, fire protection, electricity, water, sewerage, post, telephone, and telegraph, and that such public services shall be supplied on equitable terms. In case of any interruption or threatened interruption of any such services, the appropriate Malaysian authorities shall consider the needs of the Organisation as being of equal importance with those of essential agencies of the Government and shall take steps accordingly to ensure that the work of the Organisation is not prejudiced.

2. Where electricity or water are supplied by appropriate Malaysian authorities or bodies under their control, the Organisation shall be supplied at special tariffs which shall not exceed the lowest rates accorded to Malaysian governmental administration.

ARTICLE VII

Communications

1. Organisation shall enjoy for its official communications treatment not less favourable than that accorded by the Government to any other Organisation or Government, including the diplomatic mission of any such other Government, in the matter of priorities and rates on mails, cables, telegrams, radiograms, telephotos, telephone and other communications; and press rates for information to press and radio.

2. Organisation shall be entitled, for its official purposes, to use the transport facilities of the Government under the same conditions as may be granted to resident diplomatic missions.

3. No censorship shall be applied to the official correspondence or other communications of the Organisation. Such immunity shall extend, without limitation by reason of this enumeration, to publications, still and requiring the enforcement of censorship in Malaysia, the appropriate Malaysian authorities shall consult with the Project Director with a view to reaching agreement on appropriate steps to be taken by him or by the appropriate Malaysian authorities in order to avoid abuse of the immunity from censorship enjoyed by the communications of the Organisation and its officers.

4. The Organisation shall have the right to use codes and to despatch and receive correspondence and other official communications by courier or in sealed bags, which shall have the same privileges and immunities as diplomatic couriers and bags.

5. Nothing in this Article shall be construed to preclude the adoption of appropriate security precautions to be determined by supplemental agreement between the Organisation and the Government.

ARTICLE VIII

Property of the Organisation and Taxation

1. The Organisation, its property and assets, wherever located and by whomsoever held shall enjoy immunity from every form of legal process except in so far as in any particular case the Director shall have expressly waived its immunity. It is however understood that no waiver of immunity shall extend to any measure of execution.
2. The property and assets of the Organisation, wherever located and by whomsoever held, shall be immune from search, requisitions, confiscation, expropriation and any other form of interference, whether by executive, administrative, judicial or legislative action.
3. The archives of the Organisation and in general, all documents belonging to the Organisation or held by it, shall be inviolable wherever located.
4. The assets, income and other property of the Organisation shall be exempt:
 - (a) from any form of direct taxation. The Organisation, however, will not claim exemption from taxes which are, in fact, no more than charges for public utility services;
 - (b) from customs duties and from prohibitions and restrictions on imports and exports in respect of articles imported or exported by the Organisation for its official use, on the understanding that articles imported under such exemption will not be sold within the country except in accordance with conditions to be mutually agreed upon;
 - (c) from customs duties and prohibitions and restrictions in respect of the import and export of its publications, still and moving pictures and films and sound recordings.
5. (A) The Organisation shall be exempted from levies and duties on operations and transactions, and from excise duties, sales and luxury taxes and all other indirect taxes when it is making important purchases for official use by the Organisation of property on which such duties or taxes are normally chargeable. However, the Organisation will not, as a general rule, claim exemption from excise duties, and from taxes on the sale of movable and immovable property which form part of the price to be paid, and cannot be identified separately from the sale price;

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(B) The Government shall grant, if requested, allotments of gasoline or other required fuels and lubricating oils for vehicles for the official use of the Organisation in quantities and at rates prevailing for diplomatic missions in Malaysia.

ARTICLE IX

Financial Facilities

1. (a) Without any financial controls, regulations or moratoria of any kind;
 - The Organisation may hold funds, gold or currency of any kind and separate foreign currency accounts in any currency;
 - The Organisation shall be free to transfer its funds, securities, gold or currency from one country to another or within Malaysia and to convert any currency held by it into any other currency;
- (b) The Organisation shall, in exercising its rights under this article, pay due regard to any representations made by the Government in so far as effect can be given to such representations without detriment to the interest of the Organisation;
- (c) The Government shall render to the Organisation the same privileges as accorded to diplomatic missions in respect of exchange facilities.

ARTICLE X

Transit and Residence

1. The appropriate Malaysian authorities shall impose no impediment to transit to or from the Regional Centre Seat, or to residence of the following persons, irrespective of their nationalities, when on official Organisation business, and shall afford them any necessary protection;
 - The Director, representatives of Member States, of the Organisation.
 - Officers of Organisation;
 - Officers of the Regional Centre;
 - Other persons invited to the Regional Centre Seat on official business. The Project Director or the Director shall communicate the names of such persons to the Government within a reasonable time.

ARTICLE XI

Director and Representatives of Member States
at Meetings

The Director, representatives of Member States at meetings convened by the Organisation shall be entitled, in the territory of Malaysia while exercising their functions and during their journeys to and from the Regional Centre Seat and other places of meetings, to the same privileges and immunities as are provided for under Article VIII of the Charter.

ARTICLE XII

Officers of Organisation

Members of Organisation Missions

Persons invited to the Regional Centre Seat on
Official Business

1. Officers of the Organisation shall enjoy within and with respect to Malaysia the following privileges and immunities:
 - (a) immunity from personal arrest or detention;
 - (b) immunity from seizure of their personal and official baggage;
 - (c) immunity from legal process of any kind with respect to words spoken or written and all acts performed by them in their official capacity, such immunity to continue notwithstanding the fact that the persons concerned might have ceased to be officers of the Organisation;
 - (d) exemption from any form of direct taxation on salaries and emoluments paid to them by the Organisation;
 - (e) exemption for officers of other than Malaysian citizenship from direct taxation on income derived from sources outside Malaysia;
 - (f) exemption, with respect to themselves, their spouses and relatives dependent on them, from immigration restrictions and alien registration;
 - (g) exemption from national service obligations for officers of the Organisation who are not Malaysian citizens;

- (h) for officers who are not Malaysian citizens, freedom to maintain within Malaysia or elsewhere foreign securities and other movable and immovable property; and whilst employed by the Organisation and at the time of termination of such employment, the right to take out of Malaysia funds in United States dollars or other currencies without any restrictions or limitation provided that the said officers can show good cause for their lawful possession of such funds. In particular, they shall have the right to take out of Malaysia their funds in the same currencies and up to the same amounts as they brought into Malaysia through authorized channels;
- (i) the same protection and repatriation facilities with respect to themselves, their families as are accorded to diplomatic envoys in time of international crises;
- (j) the right to import, free of duty and other levies, prohibitions and restrictions on import, their furniture and effects within six months after first taking up their post in Malaysia, or, in case of officers who have not completed their probationary periods, within six months after confirmation of their employment with the Organisation, the same regulations shall apply in the case of importation, transfer and replacement of automobiles as are in force for the resident members of diplomatic missions of comparable rank;
- (k) in the event of the death of an officer of the Organisation or any member of his family forming part of his household, who is not a national of or permanent resident of Malaysia, the Government of Malaysia shall impose no impediment to the export of the movable property of the deceased, with the exception of any property acquired in the country the export of which is prohibited at the time of his death; estate, succession and inheritance duties or taxes shall not be levied on movable property the presence of which in Malaysia is due solely to the presence there of the deceased as an officer of the Organisation or as a member of his family.

2. The names of the officers of the Organisation on their duty in Malaysia shall be communicated to the appropriate Malaysian authorities from time to time.

3. (a) The Government shall accord to the officers of the Regional Centre designated by the Director, diplomatic privileges and immunities.

(b) For this purpose the officers of the Regional Centre shall be incorporated by the Ministry of Foreign Affairs, in consultation with the Director, into the appropriate diplomatic categories and shall enjoy the customs exemptions granted to such diplomatic categories in Malaysia.

(c) All officers of the Regional Centre shall be provided with a special identity card certifying the fact that they are officers of the Organisation enjoying the privileges and immunities specified in this Agreement.

4. Persons other than officers of the Organisation who are members of Organisation missions, or who are invited to the Regional Centre Seat by the Organisation on official business, shall be accorded the privileges and immunities specified in Article XII (1), except those specified in 1 (j).

5. (a) The privileges and immunities accorded by this Article are conferred in the interests of the Organisation and not for the personal benefit of the individuals themselves. The Director shall waive the immunity of any officer in any case where, in his opinion, the immunity would impede the course of justice and could be waived without prejudice to the interests of the Organisation.

(b) The Organisation and its officers shall co-operate at all times with the appropriate Malaysian authorities to facilitate the proper administration of justice, to secure the observance of police regulations and to prevent the occurrence of any abuses in connection with the privileges and immunities accorded by this Article.

ARTICLE XIII

General Provisions

1. (a) The Director and the Project Director take every precaution to ensure that no abuse of a privilege or immunity conferred by this Agreement shall occur, and for this purpose shall establish such rules and regulations as they may seem necessary and expedient for officers of the Organisation and persons performing missions for the Organisation.

(b) Should the Government consider that an abuse of privilege or immunity conferred by this Agreement has occurred, the Director or the Project Director, shall, upon request, consult with the appropriate Malaysian authorities to determine whether any such abuse has occurred. If such consultation fail to achieve a result satisfactory to the Director and the Government, the matter shall be determined in accordance with the procedure set out in Article XIV.

ARTICLE XIV

Supplemental Agreements and Settlement of Disputes

1. (a) The Government and the Organisation may enter into such supplemental agreement as may be necessary within the scope of this Agreement.

(b) In view that Malaysia is a Party to the Charter of Southeast Asian Ministers of Education Organisation, such Charter and this Agreement shall, where they relate to the same subject matter, be treated as complementary.

2. Any dispute between the Organisation and the Government concerning the interpretation or application of this Agreement or any supplemental agreements, or any question affecting the Regional Centre Seat or the relationships between the Organisation and the Government, which is not settled by negotiation or other agreed mode of settlement, shall be referred for final decision to a tribunal of three arbitrators; one to be chosen by the Director, one to be chosen by the Minister for Education, Malaysia and the third, who shall be Chairman of the tribunal, to be chosen by the first two arbitrators. Should the first two arbitrators fail to agree upon the third, such third arbitrator shall be chosen by the Council of the Ministers of the Organisation.

ARTICLE XV

Entry into Force, Operation, and Denunciation

1. This Agreement shall enter into force upon approval by the Organisation Council and ratification by the Government.

2. Consultations with respect to modification of this Agreement shall be entered into at the request of the Government or the Organisation. Any such modification shall be by mutual consent.

3. This Agreement shall be construed in the light of its primary purpose to enable the Regional Centre fully and efficiently to discharge its responsibilities and fulfil its purpose.

4. Where this Agreement imposes obligations on the appropriate Malaysian authorities, the ultimate responsibility for the fulfilment of such obligations shall rest with the Government.

5. This Agreement and any supplemental agreement entered into by the Government and the Organisation pursuant to this Agreement shall cease to be in force twelve months after either the Government or the Organisation shall have given notice in writing to the other of its decision to terminate this Agreement, except for such provisions as may be applicable in connexion with the orderly termination of the operations of the Organisation at its Regional Centre in Malaysia and the disposition of its property therein.

IN WITNESS WHEREOF the Government and the Organisation have signed this Agreement in duplicate in the English language.

For the Government of
Malaysia.

For the Southeast Asian
Ministers of Education
Organisation.

Minister of Education

Director

DRAFT CONSTITUTION OF THE SEAMES REGIONAL CENTRE
FOR EDUCATION IN SCIENCE AND MATHEMATICS

In accordance with Article IV(10) of the Charter of the Southeast Asian Ministers of Education Organization, the Council of the Organization sets up a Steering Committee for the SEAMES Regional Centre for Education in Science and Mathematics. The main offices of the Centre shall be located in Penang, Malaysia.

Article I

Definitions

- a) The expression "Centre" means the SEAMES Regional Centre for Education in Science and Mathematics;
- b) The expression "Organization" means the Southeast Asian Ministers of Education Organization;
- c) The expression "Committee" means the Steering Committee of the Centre;
- d) The expression "Ministers" means the Southeast Asian Ministers of Education;
- e) The expression "SEAMES" means the Southeast Asian Ministers of Education Secretariat.

Article II

Purpose

The purposes of the Centre shall be to assist the Member States of the Southeast Asian Ministers of Education Organization to improve the teaching of Science and Mathematics in their respective countries and to that end, to undertake research, publications, and training programmes and other kindred activities within and outside Malaysia.

Article III

Status and Powers of the Centre

The Centre shall possess full juridical personality on behalf of the Organization and shall have the powers herein enumerated, subject to the laws of Malaysia.

- (i) to purchase any property movable or immovable and to take, accept and hold any such property which may become vested in it by virtue of any such purchase or by any exchange, grant, donation, lease, testamentary disposition or otherwise;
- (ii) to sell, mortgage, lease, exchange or otherwise dispose of any such property;
- (iii) to act, without compensation, as executor, administrator, administrator with the will annexed, trustee under will, deed or otherwise, or in any other fiduciary capacity of any estate or trust in which it may have interest of any kind whatsoever;
- (iv) to contract, to qualify to do business, and to execute and file all necessary papers in connection therewith, in Malaysia or any SEAMES member country;
- (v) to sue and be sued in all courts;
- (vi) to borrow money for the purpose of the Centre, to issue evidence of indebtedness therefore, and to secure the same by mortgages or otherwise and to lend money and property and assets for the purposes of the Centre, with or without security;
- (vii) to appoint and employ such faculty, staff, officers, managers, agents and employees without restriction as to nationality as the purposes of the Centre may require;
- (viii) to provide for the selection of its students and for the government and well-being of its students faculty and staff while in attendance at the Centre or any affiliate thereof or elsewhere in pursuance of the Centre's purposes;
- (ix) to develop its own curricula, set its own academic standards, and award its own certificates and diplomas; and to engage and participate in projects of instruction, study and research;
- (x) to make Bye-Laws, Rules and Regulations not inconsistent with the provisions of this Constitution and the laws of Malaysia for the management of its property and assets and the regulation of its affairs; and
- (xi) to have and exercise any powers necessary or incident to the exercise of the powers above enumerated.

Article IV

Activities of the Centre

The activities of the Centre shall be conducted in Penang, Malaysia, and such other places outside Penang, Malaysia, as may be appropriate for the furtherance of its purposes.

Article V

Organization

The Centre shall have a Steering Committee, a Centre Director, and such other officers, faculty, and staff as may be considered necessary by the Steering Committee.

Article VI

Steering Committee

a) Composition

The Committee shall consist of two representatives from each participating Member State of the Organization and the Centre Director as ex-officio member;

b) Session

- The Committee shall meet annually in ordinary session; it may meet in extraordinary session if it so decides, or if called by one-third of its members, or the Centre Director.

c) Venue

- The Meeting should in principle be held in Penang where the Centre is located unless the Committee decides otherwise;

d) Quorum

- The presence of at least two-thirds of the Members of the Committee is required for the transaction of its business;

e) Vote

- Each Member of the Committee shall have one vote. Decision shall be made by a simple majority of the Members present and voting;

f) Rules of Procedure

- The Committee shall adopt its own rules of procedure;

g) Functions

- (i) Determination of all policies in regard to the Centre;
- (ii) Nomination to SEAMEC of the person to be appointed as the permanent Director of the Centre;
- (iii) Recommendation of programmes and budgets of the Centre to SEAMEC for approval;
- (iv) Institution of annual evaluation and review of the Centre's programmes and budgets.

Article VII

Centre Director

The Centre Director is the chief administrative and legal representative of the Centre.

The Centre Director shall assume the responsibility of carrying out the work of the Centre and implement the recommendations made to him by the Committee.

Article VIII

Relations with SEAMEC

The Centre Director shall submit an annual report of the activities of the Centre to SEAMEC through the Committee and SEAMES.

Article IX

Amendment

This Constitution may be amended upon receiving the approval of a simple majority of the participating Members of the SEAMEC present and voting.

Job Description of Centre Director.

III. B KEY PERSONNEL

1. Position Title: Centre Director
2. Job Description:
 - 2.1. Responsible for planning, staffing, managing the operations of the Regional Centre.
 - 2.2. Responsible for establishing the professional stature of the Centre and developing its proper regional image.
 - 2.3. Responsible for ensuring that the Centre is operated on a sound financial basis.
 - 2.4. Although not fully responsible for obtaining funds his success in doing so will be a factor in the evaluation of his competence.
 - 2.5. His responsibilities will be international in nature and he will be under the control of no national body.
3. Salary: As given by International Standards.
4. Education Requirements: It is necessary that the candidate should have a doctorate in a Science or Mathematics subject or Science Education or Mathematics Education, it is desirable that he was an education in the humanities and that he has had education outside as well as within the region.
5. Experience: (a maximum of 10 years of applicable experience)

The applicant should have prior teaching experience - at least 5 years. - preferably in more that on subject area. Organisational experience in education or related fields is necessary. An up-to-date understanding of the trends, techniques and emerging technology of modern education and Scientific Research and Development experience are desirable. A record of interest and activity in international scientific organisations is most desirable.
6. Personal Qualifications: The applicant must have excellent English and he preferably multi-lingual.

He should have proven ability to lead others and gain their respect. His age should be between 35 - 55.

He should preferably be an excellent public speaker and a regionally known educator in Science and Mathematics.

7. Limitations:

Should be a citizen of one of the SEAMES Member States but should not be from the host country of Malaysia to demonstrate the Centre's autonomy.

8. Recommended Selection Procedures:

- 8.1. The Interim Project Office would write to the National Co-ordinating Committee to publicise the information on the job requirements for the Centre Director.
- 8.2. Applications would be screened by the respective National Co-ordinating Committees and the names of the most suitable applicants with their supporting data would be forwarded to the Ministers of Education.
- 8.3. Copies of applications and supporting data are to be forwarded by the respective Ministries of Education to the Interim Project Co-ordinator and SEAMES Director.
- 8.4. SEAMES Director, Interim Project Co-ordinator and Consultant should screen the nominations, conduct preliminary interviews of outstanding nominees and recommend two or more applicants to the Steering Committee which in turn may either interview them or select the preferred candidate on the basis of available information.
- 8.5. Chairman of Steering Committee recommends selection through SEAMES to SEAMEC for final approval.
- 8.6. The offer of appointment and terms of appointment would be made to the selected person by the Director of SEAMES

GUIDELINES FOR FUNDING OF SEAMES FIELD PROJECTS

1. CHARACTERISTICS OF FIELD PROJECTS:

At present four different field projects are in the process of being established as Regional Centres. In order that each can be an efficient Centre for the implementation of its approved plans of operation, it will have to secure adequate funds for its capital development and operation costs. The need for the funding of each of these field projects becomes evident. However, in matters of funding it will be pertinent to recognise that these field projects vary in their scope, their relationships with SEAMES countries (e.g. Singapore is not an active participant in the Los Banos Agricultural Project), their short-term and long-term plans of operation, their controlling/advisory bodies, their appeal to different foundations, agencies and countries outside the region, etc. In view of all these considerations, any attempt to formulate a specific funding scheme to be made applicable to all these Centres may not be advisable.

2. TWO TYPES OF COSTS:

2.1 Two types of costs relevant to each Project are:

(a) Capital costs;

(b) Operational costs.

2.2 Capital costs cover the cost of land to be acquired (or land already acquired) for the Centre, survey and architectural fees, construction costs of buildings and premises, cost of fixtures (e.g. electricity, water, telephones, air-conditioning, etc.), costs of equipment ** etc.

2.2 Operational costs will refer to the recurrent costs of operation of the Centre and some of these include salaries/stipends to member of the staff, purchase of supplies and stationery, maintenance costs, etc.

3. PRINCIPAL DONOR:

There is an understanding to the effect that the Government of the United States of America will meet up to 50% of the total costs (i.e. the sum of capital and operational costs) of each Project. The remaining 50% of the total costs will then have to be met by contributions/donations from interested foundations, agencies, countries outside the region etc. and/or by the SEAMES countries themselves.

* Not all equipment will come under capital development costs and therefore it may be necessary to specify either in terms of costs or life span of the equipment that could be regarded as capital items.

It is envisaged, however, that a substantial part of the remaining 50% of the total costs can be obtained from other sources in view of the nature and aims of these Regional Centres and considering that every effort will be made by the SEAMES Director and the Project Directors to raise funds from foreign countries and donors.

4. FUNDING OF CAPITAL COSTS:

In the funding of the capital costs, it may be necessary in the initial years, for the host country to bear a substantial part of this type of expenditure (50% of the capital costs). Nevertheless, the possibility of obtaining support in the form of either monetary donations/contributions or supply of capital equipment from sources outside the Organisation should not be overlooked nor ignored. In fact these possibilities should be investigated and studied so that approaches to such sources can yield fruitful results. This of course does not rule out the possibility that the other SEAMES countries might not make donations/contributions (financial or otherwise) towards the capital costs.

5. FUNDING OF OPERATIONAL COSTS:

Just as the U.S. Government will meet up to 50% of the total capital costs, she will also meet up to 50% of the operational costs. This will leave the Project to raise the other 50% of the operational costs. The raising of these operational costs may take the following forms:

- (a) contributions (monetary or in kind) from the member countries participating in the Project. The size of each of these contributions may have to be worked out with great care and it may vary directly with the member country's degree of participation in that Project. Contributions in kind (e.g. personnel, supplies, etc.) from each participating country can be assigned money values which can be considered as deductions against that particular member country's monetary contribution.
- (b) contributions in kind (e.g. personnel, supplies, etc.) from institutions, agencies, other countries. For example the the Peace Corps or the British Council may "second" its officers for service in the Project Centre for a stipulated period of time. Such contributions will certainly reduce the operational costs.
- (c) Cash donations from foundations, agencies, individual donors etc.
- (d) Tuition fees. Revenue from this source should not be overlooked. After the Project has been established for sometime, it may be possible for the Centre to cater to the needs of students

from outside the region. Where this comes into effect, it will be necessary to require such students to pay tuition fees. In this connection it may be worthwhile considering charging fairly high fees with provisos for the granting of remission of fees and scholarships. High scales of fees are advocated with the main consideration that a high standard of education can be maintained in the Centre.

- (e) Other minor sources of revenue, e.g. sale of publications, rents from premises, etc.

6. NEED FOR EACH PROJECT TO POSSESS ITS BUDGETARY PLANS:

Each Project will have to draw up its Budgetary Plans, namely, its Capital Development Plan and its Budgetary Operational Plan. Each of these plans could cover say a period from five to ten years and they should be such that they can easily lend themselves to any modifications/adjustments from time to time (perhaps annually). Each should be comprehensive and practicable and should take into account the aims and objectives of the Centre. It may be highly desirable for the capital development costs to be spread out over a number of years.

7. DETERMINATION OF THE FINANCIAL BURDEN OF THE HOST COUNTRY AND THAT OF THE OTHER SEAMES COUNTRIES:

After the two types of Plans (mentioned in the section above) have been finalised and approved by the appropriate authority, the nature and size of expenditure covering a period of years will be known. The immediate problem will be to find ways and means to obtain the "revenue" to match the expenditure. It has been outlined in the preceding paragraphs how additional funds could be obtained for the purpose. This problem is restated as follows:

- (a) Capital Development Costs

$$H = C - D$$

where H is the amount the host country will have to raise itself, C is 50% of the total capital costs represented by 2C and D is that amount (estimated) which might be raised from donors other than the U.S. Government.

- (b) Operational Costs

$$M = P - D$$

where M is the amount that the participating member countries will have to raise/contribute, P is 50% of the total operational costs represented by 2P and D is that estimated amount that might be raised from donors other than the U.S. Government.

If M will have to take the form of proportionate contributions from the participating member countries then

$$M = m_1 + m_2 + m_3 + m_4 + \dots$$

where m_1 represents the contributions from country 1, m_2 represents the contributions from country 2, etc.

(An index perhaps similar to the ADB index may be agreed upon to determine the proportionate contributions of the participating member countries. As regards deductions for contributions in kind, please refer to paragraph 5 (a).

8. EDUCATIONAL DEVELOPMENT FUND:

8.1 Another solution worthwhile considering as regards the funding of SEAMES Field Projects is the collective approach as distinct from the individual approach outlined in the preceding paragraphs in which the Project itself is to work out and obtain any "shortages" of funds from other donors and foundations. This collective approach envisions the establishment of a Central Educational Development Fund. This idea of the creation of a Central Educational Development Fund was introduced by Dr. Robert Jacobs in one of the discussions with Dr. Edwin Young on the problems of the funding of SEAMES Field Projects.

8.2 This collective approach has certain marked advantages in that it provides for the closer co-ordination between the SEAMES Director and the Directors of the Field Projects in fund raising matters. Besides it allows for the determination of the financial commitments of the participating member countries in all the Field Projects. The ability of the Controlling Body of the Central Development Fund to inform each participating member country well in advance of that country's financial commitments for a specified number of years will certainly facilitate that country's endeavours to obtain the necessary funds from her Cabinet/Government for this purpose.

8.3 The main components of the Educational Development Fund to be administered centrally in accordance with financial rules and regulations to be drawn up will be:

- (a) Donations from the principal donor, the U.S. Government. Such donations will amount up to 50% of the total costs.
- (b) Donations from other sources. Such donations may be either specific or general/pool donations or they may be either in cash or in kind.
- (c) Contributions from participating member countries and these can be either specific or general/pool contributions or they can be contributions either in cash or in kind.

8.4 Implementing this approach through the establishment of a Central Education Development Fund which will encompass the Operational Costs of Field Projects, the Fund (P) will be:

$$P = C + M + D$$

where C represents 50% of the total costs (i.e. $C = M+D$), M the aggregate of contributions/donations from participating member countries and D the aggregate donations from donors other than the principal donor.

8.5 By Projects (assuming only 3 Projects in operation), the relevant formulae of the operational costs are as follows:

$$\text{Project No. 1: } P_1 = C_1 + M_1 + D$$

$$\text{Project No. 2: } P_2 = C_2 + M_2 + D_2$$

$$\text{Project No. 3: } P_3 = C_3 + M_3 + D_3$$

The formula in 8.4 is a combination of those in 8.5

8.6 In the formula $P = C + M + D$, it will be noticed that once P is fixed, i.e. once the approved operational costs of the various projects are known, C is automatically determined. The next immediate problem will be for all those connected directly with the Projects (e.g. the SEAMES Director and the Project Directors) to plan and estimate in the light of their knowledge and experience in securing funds from various sources, the size of D. M will vary inversely with D. The contributions from participating countries will be reduced if D can be increased. For the determination of contributions from each of the participating countries, as observed earlier, an Index similar to the ADB Index may be devised.

8.7 It is realised that not all donors may agree to make donations to a general pool. Some donors may wish to make specific donations to benefit a particular Project. Furthermore donations and/or contributions from participating countries may not, in all cases, take the form of cash. All the same, by making the appropriate adjustments and by formulating acceptable fund allocation procedure, all these diverse donations/contributions can be administered efficiently by the Controlling Body. Fund allocation from the Controlling Body to Project Centres may give rise to some difficulties and problems. However, it is believed that when SEAMES and the various Project Centres become legal entities or institutions some of the exchange controls existing in member countries may no longer present major problems for the smooth passage of funds from one SEAMES country to another.

9. SOME NOTES ON FUND RAISING:

9.1 Just as it is not uncommon, nowadays, for special foundations to be established for the sole purpose of disbursing funds for worthwhile organisations, institutions, groups, etc., it is also true that today there are a number of organisations, the promotion of whose activities are primarily dependent on financial donations from foundations, etc. Fund raising has become an acceptable function and a respectable art for many administrators in the fields of educational, cultural, social and economic development. Fund raising can be said to be a technique which, when carefully applied and intelligently exploited, can yield very rewarding results. But it is not without its accompanying disappointments and frustrations. Viewed from the positive side, fund raising in an offer to and opportunity for potential donors to participate and to involve themselves in the activities of the fund raising body for the general good.

9.2 Owing to the lack of financial resources and the limited supply of highly qualified personnel within the SEAMES region, the SEAMES Field Projects will have, for some time, to be dependent on external sources for financial support and manpower assistance. To secure these necessary means of support from donors from outside or within the region, the respective Project Centre Directors will have to involve themselves in fund raising. Similarly involved will be the SEAMES Director one of whose functions will be to liaise with and co-ordinate these efforts to achieve maximum results.

PRESS COMMUNIQUE

The Steering Committee of the Interim South-East Asian Ministers of Education Regional Centre for Education in Science and Mathematics held its Second Meeting at the Institute of Technology, Bandung, Indonesia, from 16th - 19th October, 1967. This meeting was attended by two delegates from each of the six participating countries, namely Indonesia, Malaysia, Philippines, Singapore, Thailand and Vietnam, as well as members of the Task Force, the SEAMES Executive Secretary, Consultants and Observers.

During the 4-day meeting, the Steering Committee examined the Draft Development Plan, prepared by the Interim Project Office on the basis of the findings of the six National Seminars and Regional Seminar in Science and Mathematics held between July 20 and September 15 in the six participating countries. With minor amendments the Draft Development Plan was approved for submission through Interim SEAMES to the Third Conference of the Ministers of Education to be held in Singapore from 6th - 9th December, 1967.

In view of the need for further refinements to the Draft Development Plan and for carrying out the Architectural and Engineering Studies for the proposed Regional Centre buildings, the Steering Committee agreed to request for an extension of its present interim phase, July to December 1967, to 30th June, 1968.

The Steering Committee proposed to hold its third and final meeting in May 1968 in the Philippines to finalise the Draft Development Plan and to complete plans for the establishment of the Regional Centre for Education in Science and Mathematics on a permanent basis in Penang, Malaysia.

PARTICIPANTS

1. MEMBERS OF THE STEERING COMMITTEE:

CHAIRMAN:

Mr. Chang Min Kee
(Malaysia)

Assistant Adviser (Teachers),
Ministry of Education.

VICE-CHAIRMAN:

Dr. Licoria B. Soriano
(Philippines)

Assistant Director,
Public Schools,
Department of Education,
Manila.

RAPPORTEUR:

Mr. Chan Kai Yau
(Singapore)

Ag. Asst. Director of Education,
(Research and Statistics),
Ministry of Education.

MEMBERS:

1. Dr. Didin S. Sastrapradja
(Indonesia)

Assistant Director,
National Biological Institute,
Bogor.

2. Prof. Jozef Tarcicius Soehakso
(Indonesia)

Prof. of Mathematics,
Gadjah Mada University,
Jogjakarta.

3. Mr. Chye Kooi Ngan
(Malaysia)

Principal,
Malayan Teachers' College,
Penang.

4. Mr. Aurelio Juele
(Philippines)

Superintendent of Science Education,
Bureau of Public Schools,
Department of Education,
Manila.

5. Mr. S'ng Yew Chong
(Singapore)

Specialist Inspector (Science),
Ministry of Education.

6. Prof. Bitak Raksaboldej
(Thailand)

Professor,
College of Education,
Bangkok.

7. Dr. (Miss) Suchart Ratanakul
(Thailand)

Lecturer,
College of Education,
Bangkok.

MEMBERS OF THE STEERING COMMITTEE (Cont'd.)

- | | |
|--------------------------------------|--|
| 8. Dr. Tran Van Tan
(Vietnam) | Dean, Faculty of Pedagogy,
University of Saigon. |
| 9. Dr. Phung Trung Ngan
(Vietnam) | Asst. Professor and Head of
the Department of Botany,
Faculty of Science,
University of Saigon. |

2. MEMBERS OF THE TASK FORCE:

- | | |
|---|--|
| 1. Dr. Dolores Hernandez
(Biology) | Director,
Science Teaching Centre,
University of the Philippines,
Diliman, Rizal,
Philippines. |
| 2. Dr. Sunt Techakumpuch
(Chemistry) | Department of Chemistry,
Faculty of Science,
Chulalongkorn University,
Bangkok, Thailand. |
| 3. Dr. Soenono
(Physics) | Dean,
Faculty of Science and Mathematics,
Gadjah Mada University,
Jogjakarta, Indonesia. |
| 4. Prof. Dang Dinh Ang
(Mathematics) | c/o Prof. Tran Van Tan,
Dean, Faculty of Pedagogy,
University of Saigon,
Vietnam. |

3. OFFICERS FROM INTERIM PROJECT OFFICE:

- | | |
|-------------------------|---|
| Programme Co-ordinator: | Mr. C. Ganasalingam
(Malaysia)
Vice-Principal,
Malayan Teachers' College,
Penang. |
| Consultant: | Mr. T.B. Slattery
(U.S.A.)
U.S. AID Consultant. |

4. REPRESENTATIVES FROM INTERIM SEANES, BANGKOK:

- | | |
|----------------------|--|
| Executive Secretary: | Mr. Thavisakdi Srimuang
(Thailand) |
| Legal Adviser: | Dr. Prajit Rojanaphruk,
Ministry of Foreign Affairs,
Thailand. |

5. CONSULTANTS:

1. Dr. Robert Jacobs
(U.S.A.)

Regional Education Adviser,
U.S. AID.
Bangkok.

2. Dr. R.M. Straw
(U.S.A.)

Consultant (Science),
Peace Corps,
Malaysia.

6. OBSERVERS:

Dr. Soemantri Hardjoprakoso,
Secretary-General,
Ministry of Education,

Prof. Dr. G.A. de Neve,
Dean, Faculty of Science and
Mathematics,
University of Padjadjaran,
Bandung.

Ir. Col. Kuntodji,
Rector,
Institute of Technology,
Bandung, Indonesia.

Prof. Dr. R.P. Tedja,
Dean, Department of Physics and
Mathematics,
Institute of Technology,
Bandung.

Mr. John Goatly,
Representative,
British Council,
Malaysia.

Dr. Arini Waworoentoe,
Dean, Department of Chemistry
and Biology,
Institute of Technology,
Bandung.

Prof. Dr. Tojib Hadiwidjaja,
National Co-ordinating Committee,
SEAMEQ.

Mr. Sujono Kromodimuljo,
Secretary,
National Co-ordinating Committee,
SEAMEQ.

Mr. Hadyanto Martosoebroto, M.Sc.
Dean, Department of Mining and
Geology, I.T.B.,
Bandung.

Prof. Dr. Sarwono Prawirohardjo,
Chairman,
Council for Science of Indonesia.

Ir. Djali Ahimsa,
Bandung Atomic Reactor.

Ir. Hadis Sumantri,
Institute of Research and
Development in Basic Education,
Bandung.

Prof. Garnadi,
Institute of Teachers' Training,
Bandung.

Mr. Hikmat M.A.
Office of Planning and
Development of Basic Education,
Bandung.

Dr. Ir. Suhadi Rekswardojo,
Chairman,
National Research Institute.

Dr. Sjarifudin,
Dean, Faculty of Science and
Mathematics,
Teachers' College,
Bandung.

7. DRAFTING COMMITTEE:

- | | | |
|--|---|------------------------|
| 1. Dr. Liceria B. Soriano
(Philippines) | - | Chairman |
| 2. Mr. Chan Kai Yau
(Singapore) | - | Rapporteur |
| 3. Mr. C. Ganasalingam
(Malaysia) | - | Programme Co-ordinator |
| 4. Mr. T.B. Slattery
(U.S. AID) | - | Consultant |
| 5. Dr. R.M. Straw
(Peace Corps) | - | Consultant |

8. ORGANISING COMMITTEE:

- | | | |
|---|---|---------------------------|
| Dr. Sri Irini Waworoentoe
Dr. Benedictus Suprpto
Dr. Much. Ansjar
Mr. Hadianto Marto Subroto M.Sc. | - | Advisers/Supervisors |
| Mr. Usman Sastranegara | - | Co-ordinator |
| Mr. Moh. Kosim Prawiramihardja | - | Treasurer |
| Drs. Walujo Luskanto | - | Secretariat |
| Drs. M.T. Zew | - | Protocol |
| Mr. Dipl. Inn. Arch. Widadgo | - | Decoration |
| Mr. Ronny Manangka | - | Accommodation |
| Mr. Usman Sastranegara | - | Transportation |
| Miss Lee Yoon Fung (Malaysia)
Drs. Suwarno Wirjosimin (Mn)
Miss Paulin Tee
Mr. Gi Tambunan
Mr. Miljardi Kahar
Mr. R.E. Nesach
Miss Lio Tjoe Tio
Mr. E.B. Mangunson
Miss Wiwik Sringatus | - | Stenographers/Secretaries |
| Mr. Drs. Soehartono | - | Refreshment |
| Miss Kustantini | - | Refreshment |
| Mr. Ronggur | - | Cultural Evening |

ADDRESS OF WELCOME BY THE RECTOR OF INSTITUTE OF TECHNOLOGY,
BANDUNG, INDONESIA.

IR. COL. KUNTOADJI

Ladies and gentlemen, and the honorable members of the Steering Committee of the Regional Centre for Science and Mathematics.

Welcome to Bandung and welcome to the campus of the Bandung Institute of Technology!

It is a real pleasure and a great honour for me to be host of the Second Meeting of the Steering Committee of the Regional Centre of the SEAMEC countries for Education in Science and Mathematics.

As I have understood, the subjects you are going to discuss will cover many things in the fields of education, science, and mathematics, and particularly the education in science and mathematics at the elementary and secondary levels. Bandung Institute of Technology has normally a lot to do with the wide range of science and mathematics, but in the matters now being put into discussion, this Institute has little to say. To many people it looks as if it is a little bit out of place for the Institute to play the host of such important conference. However, we feel that the now existing system at the secondary school level for the education of science and mathematics is no longer adequate to meet the current advance in science and technology. Neither is it adequate to meet the prerequisites for the science and mathematics at the university level. It rather tends to impede the progress of the development and modernisation of our countries. So it becomes a problem of our deep concern.

Therefore, we are delighted to know that you have already taken the important steps towards the solution of this problem and we are glad to be the host of this meeting. We realize that the problems you face are very complex and delicate; though with your ability and with the ardent devotion you have shown, I am sure that you will turn this meeting into a great success.

We are happy to provide any assistance you may need, and I wish: may your visit to our campus remain as a nice memory to all of you.

Speech by Mr. Chang Yin Kee, Chairman of the Steering
Committee at the Second Meeting of the Steering
Committee held in Bandung, Indonesia,
from 16th - 19th October, 1967.

Mr. Rector, Ir. Col. Kuntoadji, Dr. Soemantri Hardjoprakoso, Secretary-General of the Ministry of Education and Culture of the Republic of Indonesia, the Representative of the Director, SEAMES, Mr. Thavisakdi Srimuang, Dr. Robert Jacobs, Regional Education Adviser of U.S. AID, Officials of the Ministry of Education and Culture in Indonesia and of the Institute of Technology, Bandung, Members of the Steering Committee and Task Force, Consultants, Observers, Representatives of Foundations and Educational Institutions, Ladies and Gentlemen:

It is indeed a great honour for me as Chairman of the Steering Committee of the SEAMES Regional Centre for Education in Science and Mathematics to welcome on behalf of the Steering Committee all the distinguished guests, delegates and observers and friends to the Second Meeting of the Steering Committee. The Steering Committee is indeed grateful to the Government of Indonesia and to the Ministry of Education and Culture and the Institute of Technology in particular for so kindly agreeing to host this Second Meeting of the Steering Committee in this beautiful city of Bandung. On behalf of the Steering Committee, I would like to convey to the Government of Indonesia through you, Mr. Rector, the sincere thanks of the Committee and SEAMES for giving us this privilege to hold our second meeting in Bandung.

2. It is also a great privilege for us to have the Secretary-General of the Ministry of Education and Culture for Indonesia, Dr. Soemantri Hardjoprakoso, grace this occasion by consenting to declare open this second meeting and to host this evening's cocktail party in honour of the delegates of the Steering Committee and Task Force members. I still remember the occasion of November 1966 when Indonesia attended for the first time the Second Conference of the Ministers of Education for South-East Asia at Manila. I was present then as one of the advisers to the Minister for Education, Malaysia, and therefore was privileged to meet you and your colleagues at this important meeting in November 1966 in Manila, at which the formal approval of the Ministers of Education of South-East Asia was given to launch the regional project for Science and Mathematics for South-East Asia. Your presence at the meeting in Manila and your presence today at this very important meeting of the Steering Committee are evidence of your strong support and encouragement and I am sure all the members of the Steering Committee and the Task Force will take inspiration and hope from your presence and that of the senior officials of your Ministry and the Institute of Technology, Bandung. Please accept on behalf of the Steering Committee our very heartfelt thanks and appreciation.

3. In preparation for this second meeting, I made an advance trip three weeks ago to your beautiful country to discuss arrangements for the second meeting with Mr. Sujono Kromodimuljo, Head of the Ministry's Division for External Affairs, and also with the Rector and officials of the Institute of Technology at Bandung. The warm reception, that I received and the very generous co-operation which was offered and promised and which has seen fruition in the arrangements made for the second meeting, compels me to express the thanks of the Steering Committee to Mr. Sujono, to the Rector and the officials of the Institute of Technology for your very kind assistance and co-operation.

4. We had hoped that the Director of SEAMES, Dr. Kaw Swasdi Panich, could be with us together with the Executive Secretary of SEAMES, Mr. Thavisakdi Srimuang, at this important meeting. Unfortunately Dr. Kaw is away in the United States and though we shall miss his guidance we are glad, however, that the Executive Secretary of SEAMES, Mr. Thavisakdi Srimuang, is able to be with us and guide us in our work. We are of course all so glad to have the Regional Adviser of U.S. Aid Programme in this region, Dr. Robert Jacobs, with us today. He has been a real source of help and advice to the Interim Project Office and the Regional Centre. As the adviser responsible for putting forth our programmes to the United States authorities in Washington, he has been largely instrumental for obtaining the necessary funds and support for all the pre-project activities of the Regional Centre. To both of you, Dr. Jacobs and Mr. Thavisakdi Srimuang, the Steering Committee expresses its very sincere thanks and appreciation.

5. For the purpose of this meeting, we have invited a number of observers from the many fine educational institutions in this country. We have also invited many Foundations including the British Council to this second meeting. To all the representatives of these educational institutions and Foundations, may I, on behalf of the Steering Committee, welcome you all to this Second Meeting of the Steering Committee and express the hope at the same time that the Regional Centre when it becomes permanently established in the near future will continue to receive your support and encouragement and advice in furthering the objectives of the Regional Centre. For without your support and your advice, the Regional Centre will not be able to play the role that it is expected to play in improving the teaching of Science and Mathematics and thereby to prepare the developing countries of South-East Asia for a more glorious future in this highly technical and scientific age.

6. Having now extended all the thanks and appreciation of the Committee to all those who have helped to make this second meeting possible in Indonesia, it is now my duty as Chairman of the Steering Committee to present a progress report of the Regional Centre since the First Meeting of the Steering Committee held in Penang in May 1967. It will be recalled that the Steering Committee at its first meeting recommended to the Interim SEAMES a budget for six proposals costing a total of US\$73,247 for the interim period, May to December, 1967. This budget was duly conveyed to the U.S. Government through the kind offices of the Interim SEAMES and Dr. Jacobs in Bangkok. A total sum of US\$50,000 was approved in early June to finance the pre-project activities of the Regional Centre and handed towards the end of June to the Malaysian Government to be held in trust in a formal letter of agreement signed between the American Ambassador in Malaysia and the Hon'ble the Minister of Education, Malaysia.
7. On receipt of the necessary funds from the United States Government, the Interim Project Office was opened at the Malayan Teachers' College (Penang) as a result of an offer of free office space and use of her facilities by the Malaysian Government. The Malaysian Government also made available the full-time services of the Vice-Principal of Malayan Teachers' College (Penang), Mr. C. Ganasalingam, to serve as the Programme Co-ordinator for the Regional Centre. Almost at the same time, the U.S. Government provided the expert services of a Consultant to the Regional Centre in the person of Mr. T.B. Slattery. Under the guidance and direction of the Programme Co-ordinator and the Consultant, the Interim Project Office convened the first meeting of the Task Force of six educators from the participating countries in June 1967 in Singapore. This Task Force drew up the guide-lines for the National Seminars in Science and Mathematics to be held in all participating countries. I am very glad to announce that all the member countries have held their National Seminars before the target date of August 15 and have submitted their reports of their National Seminars for study at the Regional Seminar held in Penang, Malaysia, from September 12 to 15. The reports of these National Seminars contained a great deal of valuable information, which was discussed in great detail at the Regional Seminar. At the conclusion of the Regional Seminar, the Task Force held its second meeting to study the five reports drawn up at the Regional Seminar and to prepare for the consideration of the Steering Committee a Plan of Operations or a blue-print of activities for the permanent Regional Centre when it is established in the near future.

8. From the brief report of the activities of the Interim Regional Centre from May to October, 1967, it will be seen that a great deal of activities have taken place. Six National Seminars followed by a Regional Seminar in Science and Mathematics and two Task Force meetings have been held in a short space of four months. I am sure you will all agree that the Steering Committee has set itself a very ambitious and tight time-table in order that the Steering Committee could be able to draw up a Plan of Operations in time for this second meeting in October and to enable it to present a draft Plan of Operations for the third meeting of the Ministers of Education for South-East Asia which was originally planned in November and which I am told now is scheduled to be held in the early part of December.

9. I must congratulate all the participants in the various National Seminars in the respective countries, the delegates from the six countries who took part in the Task Force meetings as well as in the Regional Seminar for the very splendid manner in which they have responded to the call of the Steering Committee. There is an urgent need to identify the problems of the teaching of Science and Mathematics in this region in order to draw up plans for inter-regional co-operation in these two vital fields of education. As you will all agree, the Regional Seminar in Science and Mathematics was the first of its kind to be held in this part of the world and as stated in the report of the Regional Seminar, this was a unique experiment in attempting to solve and discuss regional educational problems. The fact that educators from this region with such diverse background and interest could agree upon things and could develop comprehensive programmes for the Regional Centre speaks well for the future of the Centre as well as for the determination and dedication of educators in this region for inter-regional co-operation and collaboration.

10. The main task of preparing the working papers for this second meeting has fallen naturally and inevitably on the Programme Co-ordinator, Mr. C. Ganasalingam, and the Consultant, Mr. Slattery. To them the Steering Committee owes a very sincere vote of thanks for the very hard work they have put in and for their high sense of dedication. The report of the Regional Seminar in Science and Mathematics is the result of very devoted and sustained work put in by the members of the Task Force as well as by delegates of the Regional Seminar and will be an educational document of great value to educators interested in understanding the problems of the teaching of Science and Mathematics in this region. The Draft Development Plan has been drawn up mainly by the Consultant, Mr. Slattery, working closely with Mr. Ganasalingam, on the basis of the findings of the Regional and National Seminars. This plan will form the main business of the Second Meeting of the Steering Committee.

Many concrete proposals have been outlined in the Draft Development Plan. There are however areas which require to be further investigated and examined before definite proposals could be put up for consideration by the Steering Committee. It is understandable that in the face of such tremendous rush and also in the face of the tremendous tasks faced by it, the Interim Project Office has not been able to complete its findings on all the proposals received from the Regional Seminar and the National Seminars. In view of this, a proposal is being put to the Steering Committee in the interests of better planning and better co-ordination of effort to extend the present interim phase from July to December 1967 to June 1968 in order to enable the Steering Committee to be in a better position to put up a much better plan with fuller details for the Regional Centre in Science and Mathematics. This will be the other important business of the Steering Committee.

11. In my personal view, there is justification for the extension of the present interim period. At the opening of the Regional Seminar in Penang in September this year, I spoke of the need for the Regional Committee to conduct a survey of the training requirements of industries in this region so that the Regional Centre may be able to gear its training and specialist facilities to the manpower requirements of industries and national planning of member countries in our region. In return, it is hoped that industries will be able to offer assistance by way of scholarships and financial funds to help subsidize the activities of the Regional Centre. I also made another point that when the Steering Committee has prepared its Plan of Operations, it should appoint a team of educators from this region to consult the various scientific and technical organisations, such as the National Science Foundation and the National Academy of Sciences in the United States of America, C.R.E.D.O. (which stands for the Centre for Curriculum Revision and Educational Development Overseas) and the Association for Science Education in the United Kingdom and other such organisations. The purpose of such consultations is to seek advice and to determine the degree of assistance which the Regional Centre can expect to have from these organisations once the permanent centre is set up in Penang in Malaysia. To me it is vital that experts in the fields of Science and Mathematics in the advanced countries be brought to work with educators in our region in order that the teaching of Science and Mathematics in this region can be brought in line with the latest developments and thinking in these two fields.

12. In seeking expert advice and assistance from outside the region, I do not imply that the member countries of this region have not made any progress in respect of the teaching of Science and Mathematics in this region. Far from it. Here, I would like to draw the attention of the Steering Committee to a very strong

view-point expressed by His Excellency, the Hon'ble Carlos P. Romulo, Chairman of SEAMEC at the meeting in Manila in November 1966. This view-point is contained in his message to the Second Meeting and suggests: "that in our decisions to adopt projects we give some thoughts to the strengthening of already existing academic and research centres as an alternative to the setting up of regional centres which might be competitive in an adverse way with national institutions that are already in existence". This view-point which was accepted in principle by the Ministers of Education of the six participating countries makes it necessary for all of us in our task of planning the operations of the Regional Centre for Education in Science and Mathematics to bear in mind always that at the best, again to quote the inspiring words of our distinguished Chairman of SEAMEC, "the Regional Centre must be a powerful instrument for accelerating the progress of national efforts in Science and Mathematics education".

13. It is therefore in this spirit of mutual friendly co-operation and mutual assistance that the Regional Centre project for Science and Mathematics was unanimously approved by the Ministers of Education of South-East Asia. It is also in the same spirit that the Steering Committee of the Regional Centre for Education in Science and Mathematics has been brought together to discuss the future plans of operation for the Regional Centre. I therefore would like to make an appeal to the eminent educators of Indonesia and in all member countries and also from the advanced nations to give to the Regional Centre their unstinted advice, support and co-operation in helping to improve the Science and Mathematics programmes in this region for the benefit of the peoples of our member countries.

14. I feel it is my duty to inform this gathering that our Consultant, Mr. Slattery, will be returning home at the end of this second meeting. In fact he should have returned earlier but because he so much wanted to complete his assignment for the Regional Centre by drawing up the Draft Development Plan, he had delayed his departure for our sake. All of us who have had the privilege of working with him and seeing him produce such wonderful results will feel the loss of his expert services. To you, Mr. Slattery, words fail me in expressing adequately the sincere thanks of the Steering Committee but believe me, we fully appreciate all that you have done for us. We wish you greater success and happiness in the near future wherever you may be and we still hope that when we earn the extension of our interim period and when we subsequently establish the Regional Centre you will come back to us.

15. May I now conclude my Progress Report with very sincere thanks to you, Mr. Rector, Dr. Soemantri Hardjoprakoso, Mr. Sujono Kromodimuljo, all the officers of the Ministry of Education and Culture and Institute of Technology, Bandung, for all the kind assistance in making this meeting possible in Bandung. Sibuan terima kaseh.

Address by Mr. Thavisakdi Srimuang, Representative of the Interim SEAMES Headquarters, delivered at the Opening Ceremony, The Second Meeting of the Steering Committee of the SEAMES Regional Centre for Education in Science and Mathematics, at the Institute of Technology, Bandung, October 16, 1967.

Mr. Secretary - General of the Minister of Education and Culture, Mr. Chairman and Members of the Steering Committee, Consultants, Observers, Mr. Rector of the Bandung Institute of Technology, Distinguished Guests, Ladies and Gentlemen:

In the first place, Dr. Kaw Swasdi Panich, Interim SEAMES Director, asks me to convey to the second Meeting of the Steering Committee his greetings and best wishes for the success of the deliberation here in Bandung. He particularly regrets that earlier official commitments effectively prevent him from joining this assembly here today. It is therefore a great honour and privilege for me to participate in this meeting on behalf of the SEAMES Headquarters.

This is the first time a full-fledged SEAMES regional meeting is held in Indonesia under the auspices of the Government of the Republic of Indonesia. Let us hope it is not the last. Let us pray, Ladies and Gentlemen, that this meeting which is a deliberative, decision-making occasion will herald an age of regional cooperation in education in which Indonesia actively contributes her leadership and the wealth of her resources for the better good of the region. It is my conviction that this ancient cradle of civilization, centering around the ilse of Djawa, will once more, when the time comes, provide the peoples of this part of the world with the guiding light of wisdom and technical know-how that is indigenous of this country. On behalf of the new SEAMES Organization, I take this opportunity to register the Organization's gratitude to the Government of Indonesia which so graciously hosts the meeting here.

It has been almost a year since Indonesia joined this regional-co-operation-in-education movement, which had been given the first impetus a year earlier when Mr. Eugene B. Black, Special Adviser to the United States' President first met with the SEA Ministers of Education. Since the Manila Ministerial Conference in November 1966, the main thrust of the SEAMES Headquarters' activities has been aimed at translating the broad project ideas, already approved by the Manila Conference into concrete project proposals, together with the necessary preparation in order to launch the various projects on a permanent basis. This is especially true in the case of the Science and Mathematics Project, the Tropical Agriculture Project and the English Language Education Project to be located in Penang, Los Banos and Singapore respectively. In order to achieve this objective, a Steering Committee or a governing board has been set up for each project area entrusted with the broad task of carrying out the above objective on behalf of the Organization. A project office has also been set up with the cooperation of the prospective host country of the project in order to provide the necessary logistic support for the Steering Committee and its like to perform its task.

As it turns out, the various governing boards decided to assess anew the national requirements of the various participating countries in order to have the data and information at the national level discussed in a regional seminar. What emerged from such meeting of the minds was a Plan of Operations which should present a clear cut proposal for the activities to be undertaken during the next five or ten years. This Plan of Operations has now been so capably been drafted out by the various project offices for review and revision by the governing boards concerned. It is my understanding that this is precisely the task on hand of the present second meeting of the Steering Committee of the Regional Science and Mathematics Project. In addition, the Committee will be expected to examine the draft legal papers that will later be negotiated to serve as the legal basis for the activities of the project. Ladies and Gentlemen: The planning process has now reached the most crucial stage because it is expected that at this meeting the Steering Committee will be able to make definite recommendations for the review and approval of the Southeast Asian Ministers of Education. I have the pleasure to announce that the Third Ministerial Conference is now definitely scheduled to take place in Singapore between the 6th and 9th December this year.

It is my impression that, after this Second Steering Committee Meeting, the Interim Project Office under the chairmanship of Mr. Chang Min Kee and the coordinatorship of Mr. C. Ganasalingam will have more than a full-time job to mobilize resources for the opening of the Centre and starting its various training, research and clearing house activities. Negotiations will have to be made not only with the Government of Malaysia, Host Country of the Centre, but also with other participating countries, as well as with prospective donor countries, organizations and foundations. Work will have started in order to acquire the minimum physical plant facilities for use by the Centre. Therefore, the next phase of the pre-project period, prior to the formal launching of the project, is by no means an idle period. The success or failure of the next phase of the pre-project period will be of critical importance to an early and smooth launching of the project. It will also reflect the wisdom of the policy and guidance of the present Steering Committee, whose main function is to ensure the success of the pre-project period.

Ladies and Gentlemen: This regional cooperation in education is a very exciting venture that our region have pioneered for the first time in history. The success of the whole movement will testify that we in our region can think together, work together and enjoy together the mutual benefits that we have created for ourselves and our posterity. And now, without tarrying further on other perspectives and dimensions of the movement, I shall take this happy opportunity to wish the Steering Committee a very successful and pleasant meeting.

Message of The Honourable CARLOS P. ROMULO, Chairman,
Southeast Asian Ministers of Education Council (SEAMEC) and
Secretary of Education, Republic of Philippines, at the
Second Meeting of the Steering Committee of the
Regional Centre for Education in Science and
Mathematics held in Bandung, Indonesia,
from 16-19 October, 1967.

I recall that the Regional Centre for Education in Science and Mathematics was one of the ten cooperative projects presented to the Ministers of Education of the member countries during the second Southeast Asian Ministers of Education Conference held in Manila on November 25-28, 1966. In that conference, the Southeast Asian Ministers of Education Council was formally organised, of which I was elected the Chairman. I also recall that the cooperative project in education for science and mathematics was accepted unanimously by the various Ministers without any modification of the proposal submitted by the Select Committee that had met in Bangkok. Now, barely ten months from the time the project was approved by the Council, commendable progress has been made along its organization and eventual operation.

I must therefore congratulate all those responsible for such progress: the Steering Committee of the Center and its Chairman, Mr. Chang Min Kee, for planning ahead and paving the way towards the near realization of the project; the Program Coordinator, for directing the preliminary activities of the Centre during this interim phase; and the National Co-ordinating Committee of Malaysia and also those of the various governments, for their efforts to conduct national seminars preliminary to the holding of the regional seminar in Penang. In so quick and brief a time we have succeeded to bring together science and mathematics specialists from the member countries to formulate programs and plans of action that the centre may see fit to follow in serving the region.

The National Seminars held in Bangkok, Penang, Jogjakarta, Manila, Saigon and Singapore followed by the Regional Seminar held in Penang have fully confirmed the report of the feasibility team that there is a high degree of interest and a considerable amount of activity in the reform of education in science and mathematics in each of the countries visited, and that "there was unanimous agreement that a regional centre properly conceived, and conducting a carefully designed program, could be a powerful instrument in the acceleration of national efforts." We are aware that in every country there is, to a varying degree, certain amount of concern and tangible action towards improving science and mathematics education. Advocating regional cooperation, the Honorable Chief Minister of Penang, during the first meeting of the Steering Committee, said that "The first concern would be to consider how best the member countries can mobilize schemes for the improvement of teaching science and mathematics in elementary and secondary schools in the region." I agree with him.

It is vitally necessary to pull together the thinking of the most qualified human resources of the region in order to draft a carefully designed program for the guidance of the regional centre. To set the tone for this occasion, as Mr. Chang Min Kee has asked me to do, let me reiterate a viewpoint which I presented

to the Ministers of Education of the six countries during the historic Manila meeting, namely: That in our decisions to adopt projects, we give some thoughts to the strengthening of already existing academic and research centres, as an alternative to the setting up of regional centres which might be competitive in an adverse way with national institutions that are already in existence.

This viewpoint was accepted in principle by the Education Ministers of the six participating countries, and I feel it my duty and responsibility, as Chairman of the SEAMEQ, to convey the same note to you who are about to lay on the drawing board, as it were, the scope and plan of operation of the Regional Centre for Education in Science and Mathematics. It is my hope - and the hope of all member states - that the program you will formulate in this meeting will be so designed as to impel the search for innovative ideas that, when put together, in the spirit of mutual friendly cooperation, could be a powerful instrument for accelerating the progress of national efforts in science and mathematics education.

Let me close with the hope that with the full support of Malaysia and the sustained cooperation of all our governments, we shall be able to manifest to our numerous friends of the free world our sincerity and earnestness and resolve to make of science, technology, and education the true precursors that they are of national development, and thereby to narrow down whatever gap exists between our developing states and other countries.

MESSAGE FROM HIS EXCELLENCY MR. SARINO MANGUNPRANOTO,
MINISTER FOR EDUCATION AND CULTURE, INDONESIA.

On behalf on the Government of the Republic of Indonesia I have the pleasure of welcoming the Second Meeting of the Steering Committee for Education in Science and Mathematics of the SEAMEC to be held from 16 to 19 Oct., 1967, in Bandung.

At the same time, I also wish to express reassurances of our greatest confidence that the SEAMEC could play a significant role in the future development of Southeast Asia. Our interest in the efforts of the Steering Committee for Education in Science and Mathematics is indeed a reflection of our recognition of the part to be played by the Committee in the overall programmes of the SEAMEC.

I send my best wishes for continuous progress and success in the noble pursuit of SEAMEC, particularly the most valuable efforts of the Steering Committee.

Djakarta, October 1967.

Sarino Mangunpranoto
Minister of Education and Culture

Speech by Prof. Dr. Sumantri Hardjoprakoso
Secretary General of The Department of
Education and Culture
Jakarta, Indonesia.
16 October, 1967.
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Mr. Chairman,
Honourable Delegates,
Our honoured guests.

On behalf of the Government of the Republic of Indonesia I would like to take this opportunity first of all to extend our warmest welcome to our most esteemed guest delegates from member states of the SEAMEC. It is our sincere wish that our most honoured guests would have no difficulties to adjust to our situation and would easily make themselves at ease and at home, here in Indonesia, particularly in Bandung.

It is indeed a great honour to us to have the opportunity to be host to an important meeting such as the Second Meeting of the Steering Committee for Education in Science and Mathematics, where the most prominent educators from SEAMEC member countries come together to try to find common efforts that we might undertake jointly to deal with educational problems, particularly those related to Education in Science and Mathematics, that we all share.

This important meeting is the first of the regional conferences within the programs of SEAMEC to take place in Indonesia. For this reason it is a matter of great concern to us to do all we can to have the conference finish its tasks without any difficulty.

As much as I have confidence in the roles that could be played by SEAMEC in the development of Southeast Asia, I wish the conference great success in its highly valued efforts.

I will now declare the Second Meeting of the Steering Committee for Education in Science and Mathematics officially open.

Thank you.

Budgets for the Proposed Development Plan

The two following budget proposals are recommended to SEAMEC for consideration at the third meeting in Singapore 6-9th December, 1967.

- (1) Revised Budget (Blue) using a modified salary scale for professional staff which is midway between International Salary scale and local salary scale.
- (2) Economy Budget (Pink) based on a reduced program catering for 120 participants.

The Singapore delegation has prepared a third alternative budget proposal (pink) ~~using~~ ^{using} a salary scale for professional staff based on the local salary scale.

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Revised Annexure A-2
Personnel Acquisition Plan
(US\$ in 1,000)

BY FUNCTION & SKILL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
I. ADMINISTRATION						
A. Professional						
1. Director	X 14	14	14	14	14	
2. Dept. Director	X 13	13	13	13	13	
3. Sc. Advisor			X 10	10	10	
4. Consultant (1st 2 yrs)	X 20	20	-	-	-	
TOTAL	(3) 47	(0) 47	(1) 37	(0) 37	(0) 37	(4) 2205
B. Administrative & Clerical						
1. Bursar	x 4	4	4	5	5	
2. Chief Clerk	x 3	3	3	3.5	3.5	
3. Stenographers	xx 4	4	4	4	4	
4. Clerk/Typists	xx 2.5	xx 5	x 6.5	7.5	x 9.0	
5. Receptionists	x 1	1	1	1	1	
6. Tel. Operator & Reservations	x 1	1	1	1	1	
7. Postan & Bank		x 1	1	1	1	
Total Supporting Staff	(8) 15.5	(3) 19	(1) 20.5	(1) 24.0	(1) 25.5	(14) 2104.5
Total Adminis. Staff	(11)	(3)	(2)	(1)	(1)	(18)
2. TRAINING DIVISION						
A. Prof. Staff						
1. Div. Director	X 12					
2. Dept. Staffs						
Biology	X 10	x 18	xx 34	x 42	x 50	
Chemistry		X 10	xx 26	x 34	x 42	
Elem. Sc.		X 18	x 26	xx 42	x 50	
Mathematics		X 10	x 18	x 34	x 42	
Physics		X 10	x 18	xx 34	x 42	
3. Consultant (1st 3 yrs)	X 18	X 36	18	-	-	
Total Professional Staff	(3) 40	(6) 102	(6) 140	(8) 186	(5) 226	(28) 3694
B. Technicians & Clerical						
1. Lab. Tech.		xx 4.2	xx 7.0	xx 9.8	9.8	
2. Secretary	x 2.0	xx 6.0	6.0	6.0	6.0	
3. Clerk/Typists	x 1.2	xx 3.6	xx 6.0	xx 8.4	8.4	
Total Supporting Staff	(2) 3.2	(6) 13.8	(4) 19.0	(4) 24.2	(1) 24.2	(17) 784.4

* Figures in brackets denote personnel

BY FUNCTION & SKILL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
3. RESEARCH & DEVELOPMENT						
A. Prof. Staff						
1. Div. Director X	12	12	12	12	12	
2. Sr. Researcher		xx 20	x 30	x 40	40	
3. Research Asst.		xx 14	x 21	x 28	28	
4. Consultant (1st 2 yrs)	x 20	20	-	-	-	
Total Supporting Staff	(2) 32	(4) 66	(2) 63	(2) 80	(0) 80	(10) \$279
B. Technicians & Clerical						
1. Research Tech.		xx 4.2	x 5.6	x 7.0	7.0	
2. Secretary x	2.0	2.0	2.0	2.0	2.0	
3. Clerk/Typists		xx 2.0	x 3	x 4	4	
Total Supporting Staff	(1) 2.0	(4) 8.2	(2) 10.6	(2) 13.0	13.0	(9) \$46.8
GRAND TOTAL RESEARCH AND DEVELOPMENT	(3)	(8)	(4)	(4)	(0)	(19)
4. SPECIAL SERVICES						
A. Prof. Staff						
1. Div. Director X	12	12	12	12	12	
2. Special Service Officers		xx 14	xx 28	x 35	35	
3. Consultant (1st 2 yrs) x	18	18	-	-	-	
Total Prof. Staff	(2) 30	(2) 44	(2) 40	(1) 47	(0) 47	(7) \$208
B. Technician & Clerical						
1. Technicians		x 4.2	x 5.6	x 7.0	7.0	
2. Secretary x	2	2.0	2	2	2	
3. Clerk/Typists x	1.2	x 2.4	x 3.6	x 4.8	4.8	
Total Supporting Staff	(2) 3.2	(3) 8.6	(2) 11.2	(3) 15.8	(0) 15.8	(10) \$52.26
GRAND TOTAL FOR SPECIAL SERVICES	(4)	(5)	(4)	(4)	(0)	(17)

* Figure in brackets denote personnel

BY FUNCTION & SKILL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
INFORMATION CEN. & CLEARING HOUSE						
1. Prof. Staff						
1. Div. Director	X 12	12	12	12	12	
2. Editor	x 10	10	10	10	10	
3. Public Relation Specialist	x 5	5	5	5	5	
4. Graphic Arts Sup.	x 5	5	5	5	5	
5. Librarian	x 5	5	5	5	5	
6. Audio Visual Sup.			x 5	5	5	
7. Consultant (1st 2 yrs)	x 18	18				
Total Professional Staff	(6) 55	(0) 55	(1) 42	(0) 42	(0) 42	(7) \$236
1. Tech. & Clerical Support						
1. Reports & Access Specialists	x 4.0	8	x 12	x 16	16	
2. Periodicals	x 3	3	3	3	3	
3. Reproduct & Dist. Clerks	xx 2.4	xx 4.8	x 6	x 7.2	7.2	
4. Library Attend.		xx 1	x 1.5	x 2.0	2.0	
5. Public. Clerks	xx 2.4	xx 4.8	x 6.0	6.0	6.0	
6. Technicians Graphic Arts & A.V. etc.	x 1.4	x 2.8	xx 5.6	x 7.0	7.0	
7. Secretary	x 2	2	2	2	2	
8. Clerk/Typists	xx 2.4	xx 3.6	xx 6	6	6	
9. Cataloguing Clerks	x 1.2	x 3.6	x 3.6	3.6	3.6	
Total Supporting Staff	(11) 18.8	(10) 32.4	(9) 45.7	(4) 52.8	(0) 52.8	(34) \$202.5
GRAND TOTAL FOR INFORMATION CENTRE & CLEARING H.	(17)	(11)	(11)	(4)	(0)	(43)
BUILDING & GROUNDS						
1. Drivers	x .5	x 1	x 1.5	x 1.5	1.5	
2. Plant Supervisor		x	x 3	3	3	
3. Maintenance Tech.		x 1.2	xx 3.6	4.8	4.8	
4. Gardeners	xx .5	xxx 2	xxx 3.5	xxx 5.0	5.0	
5. Watchmen	x .5	xx 1.0	x 1.5	x 2.0	2.0	
6. Steward		xx 1.4	1.4	1.4	1.4	
7. Servants	xx 1.0	xxx 2.5	xxx 3.5	xxx 5.0	5.0	
8. Cooks						
9. Nurse	x	1.4	x 1.4	1.4	1.4	
10. Housekeeper	x 1.4	1.4	x 3.0	3.0	3.0	
Total Supporting Staff	(8) 5.3	(12) 11.9	(13) 22.4	(7) 26.1	(0) 26.1	(40) \$ 61.8

* Figures in brackets denote personnel

FIGURE 9 - PHASING OF CENTRE BUILDING PROGRAMME

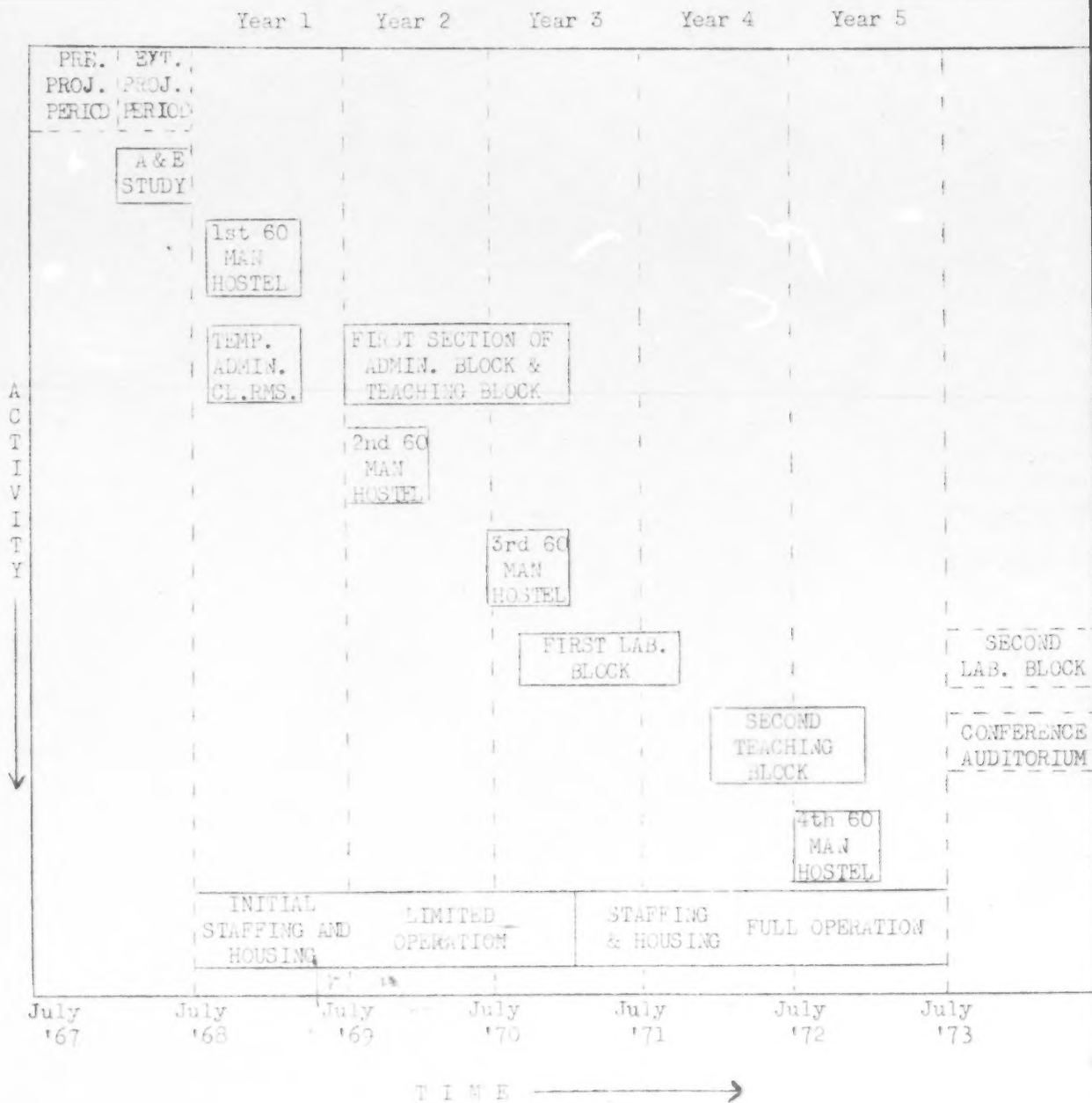


Figure 10

PHASED CAPITAL INVESTMENT - BUILDING COSTS*

(USA - Thousands of Dollars)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
1. 1st 60 Man Hostel	250					\$ 250
Temporary Class- room Block	147					147
Initial Earth Work	70	70		25		165
Initial Roads	18		52			70
Covered Walks, etc.	8		8	9		25
2. 1st Section - Admin & Teaching Block** (prorated over 1½ years)		320	175			495
3. 2nd 60 Man Hostel		250				250
4. 3rd 60 Man Hostel			250			250
5. 1st Laboratory Block (prorated over 1½ years)			152	80		232
6. 2nd Teaching Block				185		185
7. 4th Hostel					250	
8. Staff Housing						
(a) 6 Class C Single Dwellings	90					90
(b) 5 Class D Double Dwellings		110				110
(c) 5 Class D Double Dwellings			110			110
(d) 50 Flat Apartment				215	215	430
(e) Guest House for Visiting Dignitaries					25	25
HOUSING TOTAL	90	110	110	215	240	765
GRAND TOTAL	583	750	747	514	490	\$3,084

Jy'68 Jy'69 Jy'70 Jy'71 Jy'72 Jy'73

* Phased with the building Program as shown on Figure 16 following

** Includes Information Center
All costs include 15% contingency

Figure 11

CAPITAL INVESTMENTSPECIAL EQUIPMENT AND MATERIAL*

(Cost in thousands of USA Dollars)

GROUP	HEADING	Year 1	2	3	4	5	Total
ADMINISTRATION	Office Equipment	10	7	10	8	5	40
TRAINING RESEARCH/ DEVELOPMENT SPECIAL SERVICES	Model Shop and Equipment for Prototype production	5	8	15	17	10	55
INFORMATION CENTRE	Publications & Distribution	15	10	5	5	5	40
	Audio Visual unit Library	15	5	40	35	10	115
	Library	10	15	20	20	20	85
	Science Equipment	5	5	60	60	30	160
	TOTALS	60	50	145	145	95	495

* Not associated with specific project or part of standard construction plans.

Revised

Figure 12

SUMMARY - OPERATING COSTS

(USA - Thousands of Dollars)

FUNCTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
1. PROFESSIONAL STAFF*						
Administration	47	47	37	37	37	205
Training	40	102	140	186	226	694
Research & Development	30	66	63	80	80	319
Special Services	30	44	40	47	47	208
Information Centre	55	55	42	42	42	236
TOTALS	202	314	322	392	432	1,662
2. SUPPORTING STAFF**						
Administration	15.5	19.0	20.5	24.0	25.5	104.5
Training	3.2	13.8	19.0	24.2	24.2	84.4
Research & Development	2.0	8.2	10.6	13.0	13.0	46.8
Special Services	3.2	8.6	11.2	15.8	15.8	54.6
Information Centre	18.6	32.4	45.7	52.8	52.8	202.5
Building & Grounds	3.9	11.9	26.1	26.1	26.1	90.4
TOTALS	46.6	93.9	129.4	155.9	157.4	583.2
3. PROJECTS COSTS***						
Training	130	308	333	375	417	1,563
Research & Development	-	122	244	366	508	1,240
Special Services	-	13	26	44	58	141
Information Centre	-	-	-	-	-	-
TOTALS	130	443	603	785	983	2,944
GRAND TOTAL OPERATING COSTS	408.6	850.9	1054.4	1332.9	1572.4	5,189.2

Jy'68 Jy'69 Jy'70 Jy'71 Jy'72 Jy'73

* See Annexure A-3

** See Annexure A-4

*** See Annexure A-6

Figure 13

REVISED SUMMARY BUDGET - PROJECTED FIVE YEAR PROGRAM

(USA - Thousands of Dollars)

COST ITEM	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
<u>OPERATIONAL COSTS</u>						
Professional Staff Salaries*	202.0	314.0	322.0	392.0	432.0	1662.0
Supporting Staff Salaries**	46.6	93.9	129.4	155.9	157.4	583.2
Project Operations	130.0	443.0	603.0	785.0	983.0	2944.0
TOTAL OPERATIONAL COSTS	378.6	850.9	1054.4	1332.9	1572.4	5189.2
<u>CAPITAL INVESTMENT***</u>						
Building & Grounds	583.0	750.0	747.0	514.0	490.0	3084.0
Special Equipment	60.0	50.0	145.0	145.0	95.0	495.0
TOTAL CAPITAL INVESTMENT	643.0	800.0	892.0	659.0	585.0	3579.0
GRAND TOTAL COSTS	1021.6	1650.9	1946.4	1991.9	2157.4	8768.2

July July July July July July
'68 '69 '70 '71 '72 '73

* Includes consultants - See Annexure A-3 for details

** See Annexures A-4 and A-5 for details

*** See Annexure B-1 and Figure 16

Revised Annexure A-3

PROJECTED EXPENDITURES - SALARY OF PROFESSIONAL STAFF

(In Thousands USA Dollars)

FUNCTION	Y E A R					5 YEAR TOTAL
	1	2	3	4	5	
<u>ADMINISTRATION STAFF</u>	27	27	37	37	37	165
Consultant	20	20	-	-	-	40
<u>TRAINING STAFF</u>	22	66	122	186	226	622
Consultant	18	36	18	-	-	72
<u>RESEARCH & DEVELOPMENT</u>	10	46	63	80	80	279
Consultant	20	20	-	-	-	40
<u>SPECIAL SERVICES STAFF</u>	12	26	40	47	47	172
Consultant	18	18	-	-	-	36
<u>INFORMATION CENTRE STAFF</u>	37	37	42	42	42	200
Consultant	18	18	-	-	-	36
T O T A L S	202	314	322	392	432	1,662

Assumed Salary Scales

Director General - 14 thousand
Deputy Director - 13 "
Division Director - 12 "
Dept. Heads &
Senior Staff - 9-11 "
Junior Staff - 6-9 "
Consultants as shown

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Revised Annexure A - 4

PROJECTED EXPENDITURES - SALARY OF SUPPORTING STAFF*

(In USA Dollars)

- 000 -

JOB TITLE	1	2	3	4	5	TOTALS
I. ADMINISTRATION	15.5	19.0	20.5	24.0	25.5	104.5
II. TRAINING	3.2	13.8	19.0	24.2	24.2	84.4
III. RESEARCH & DEVELOPMENT	2.0	8.2	10.6	13.0	13.0	46.8
IV. SPECIAL SERVICES	3.2	8.6	11.2	15.8	15.8	54.6
V. INFORMATION CENTER	18.8	32.4	45.7	52.8	52.8	202.5
VI. BUILDINGS & GROUNDS	3.9	11.9	22.4	26.1	26.1	90.4
TOTALS	46.6	93.9	129.4	155.9	157.4	583.2

* See Annexure A-5 for wage details

ECONOMY BUDGET FOR REGIONAL CENTER

- I. The Budget presented in Figure 13 of the Proposed Development Plan was developed about the projected future critical Regional needs as derived from the national and regional seminars. No attempt was made to eliminate critical programs because of budgetary limitations.* The objective is to determine the desirable size of the Center to accomplish all its defined missions.

This economy Budget has been developed to present a minimum cost alternative to that presented in the development plan.

It has been developed with a number of specific assumptions:

- 1) Maximum training capacity will be 120 students at Year 5 vs 240 in the Master Plan (about 1/3 of the identified needs).
- 2) The Research Program will meet about 20% of the identified needs.
- 3) The building program will be changed per the marked up Figure 1.
- 4) The permanent staff on the payroll at the end of Year 2 in the Master Plan will be capable of handling all the work of the Center and the projects by hiring outside experts for specific projects.
- 5) The Special Services Project budget was not cut because it was already minimum.
- 6) Acquisition of the Audio Visual Unit will be postponed beyond Year 5.
- 7) As in the full budget, other personnel related operating costs, such as supplies, stationery, electricity etc. are assumed included in the gross estimate of annual salaries and not broken out. It is assumed these are covered by the assumption that all personnel acquired in a given year were hired at the beginning of that year.

- II. The attached Figures have been modified from their counterpart figures in the Preliminary Development Plan to present this new budgetary data developed per the above assumptions.

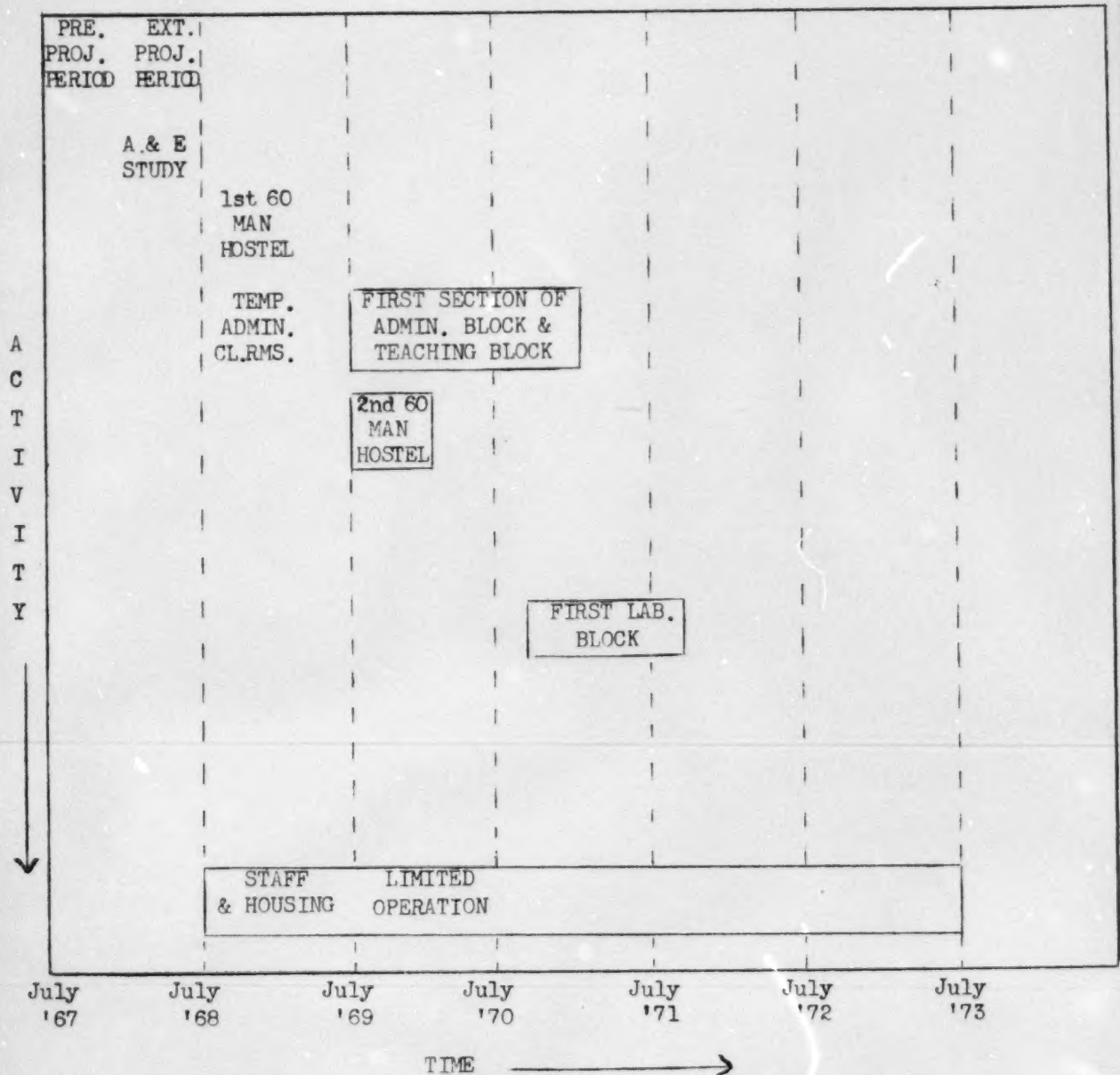
Figure 1 - Revised Phased Building Program	-	Original Fig. 9	
Figure 2 - Capital Investments	-	" "	10
Figure 3 - Capital Equipment Cost	-	" "	11
Figure 4 - Revised Operating Costs	-	" "	12
Figure 5 - Revised Summary Budget	-	" "	13

* Some were reduced in scope and phased over a longer period, however.

Figure 1

FIGURE 1 - PHASING OF CENTER BUILDING PROGRAM

ECONOMY BUDGET



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Figure 2

PHASED CAPITAL INVESTMENT - BUILDING COSTS
(USA - Thousands of Dollars)

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
1. 1st 60 Man Hostel	250					250
Temporary Class-room Block	80					80
Initial Earth Work	50	30				80
Initial Roads	18		52			70
Covered Walks, etc.			8			8
2. 1st Section - Admin & Teaching Block (prorated over 1½ years)		320	175			495
3. 2nd 60 Man Hostel		250	-	"		250
4. 1st Laboratory Block (prorated over 1½ years)			152	80		232
5. Staff Housing						
(a) 6 Class C Single Dwellings	90					90
(b) 5 Class D Double Dwellings		110				110
(c) 30 Flat Apartment				130	130	260
HOUSING TOTAL	90	110		130	130	480
GRAND TOTAL	488	710	387	210	130	1925

Jy'68 Jy'69 Jy870 Jy'71 Jy'72 Jy'73

*Phased with the Building Program as shown on Figure 1
(includes 15% Contingency)

Figure 3

ECONOMY CAPITAL INVESTMENTSPECIAL EQUIPMENT AND MATERIAL*

(Cost in thousands of USA Dollars)

GROUP	HEADING	Year 1	2	3	4	5	Total
ADMINISTRATION	Office Equipment	10	7	10	8	5	40
TRAINING RESEARCH/ DEVELOPMENT	Model Shop and Equipment for Prototype production	5	10	15	15	10	55
SPECIAL SERVICES	Publications & Distribution	15	10	5	5	5	40
INFORMATION CENTRE	Audio Visual unit Library	5	5	10	10	10	40
	Library	10	15	20	20	20	85
	Science Equipment	5	10	30	30	30	105
	TOTALS	50	57	90	88	80	365

* Not associated with specific project or part of standard construction plans.

Figure 4.

Economy Budget

SUMMARY - OPERATING COSTS

(USA - Thousands of Dollars)

FUNCTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
1. PROFESSIONAL						
Administration	47	47	37	37	37	\$ 205
Training	22	66	122	122	122	454
Research & Development	12	46	63	63	63	247
Special Services	12	26	40	40	40	158
Information Center	37	37	42	42	42	200
TOTALS	130	222	304	304	304	1264
2. SUPPORTING STAFF						
Administration	8	16	16	16	16	72
Training	3	15	15	15	15	63
Research & Development	2	8	8	8	8	34
Special Services	2	11	11	11	11	46
Information Center	14	38	38	38	38	166
Building & Grounds	3	18	22.4	22.4	22.4	88.2
TOTALS	32	106	110.4	110.4	110.4	469.2
3. PROJECT COSTS						
Training	130	308	333	375	417	1563.0
Research & Development	-	122	244	366	508	1240.0
Special Services	-	13	26	44	58	141.0
Information Centre	-	-	-	-	-	-
TOTALS	130	433	603	785	983	2944.0
GRAND TOTAL OPERATING COSTS	292	761	1017.4	1199.4	1397.4	4677.2

Jy'68 Jy'69 Jy'70 Jy'71 Jy'72 Jy'73

Figure 5

SUMMARY ECONOMY BUDGET - PROJECTED FIVE YEAR PROGRAM
(USA - Thousands of Dollars)

COST ITEM	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
<u>OPERATING COSTS</u>						
Professional Staff Salaries*	120	410	410	410	410	1,264.0
Supporting Staff Salaries	31	106	106	106	106	469.2
Project Operations	130.0	433.0	603.0	785.0	983.0	2,944.0
TOTAL OPERATING COSTS	281.0	949.0	1119.0	1301.0	1499.0	4,677.2
<u>CAPITAL INVESTMENT</u>						
Building & Grounds	555	710	387	210	130	1,925.0
Special Equipment	40	50	80	80	75	320.0
TOTAL CAPITAL INVESTMENT	590	760	467	290	205	2,250.0
GRAND TOTAL COSTS	871.0	1709.0	1586.0	1591.0	1704.0	2,927.2

* Includes consultants - See Annexure A - 3 for details

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Alternative Annexure A-2
(Personnel Acquisition Plan)

BY FUNCTION & SKILL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
1. ADMINISTRATION						
A. Professional						
1. Director	X 8.5	8.5	8.5	8.5	8.5	
2. Dep. Director	X 8.0	8.0	8.0	8.0	8.0	
3. Sc. Advisor			X 7.5	7.5	7.5	
4. Consultant (1st 2 yrs only)	X 20	20	-	-	-	
TOTAL	(3) 36.5	(0) 36.5	(1) 24.0	(0) 24.0	(0) 24.0	(4) \$145.0
B. Administrative & Clerical						
1. Bursar	x 4	4	4	5	5	
2. Chief Clerk	x 3	3	3	3.5	3.5	
3. Stenographers	xx 4	4	4	4	4	
4. Clerk/Typists	xx 2.5	xx 5	x 6.5	7.5	x 9.0	
5. Receptionists	x 1	1	1	1	1	
6. Tel. Operator & Reservations	x 1	1	1	1	1	
7. Postal & Bank		x 1	1	1	1	
Total Supporting Staff	(8) 15.5	(3) 19.0	(1) 20.5	(1) 23.0	(1) 24.5	(14) \$102.5
Total Administration	(11)	(3)	(2)	(1)	(1)	(18)
2. TRAINING DIVISION						
A. Professional Staff						
1. Div. Director	X 7.5	7.5	7.5	7.5	7.5	
2. Dept. Staffs						
Biology	X 7.0	x 14	x 28	x 35	x 42	
Chemistry		X 7	xx 21	x 28	x 35	
Elem. Science		Xx 14	x 21	xx 35	x 42	
Mathematics		X -	x 14	xx 28	x 35	
Physics		X 7	x 14	xx 28	x 35	
3. Consultants (1st 3 yrs only)	x 18	x 37	18	-	-	
Total Professional Staff	(3) 32.5	(7) 86.5	(6) 123.5	(8) 161.5	(5) 196.5	(29) \$600.5
B. Technicians & Clerical						
1. Lab. technicians		xx 4.2	xx 7.0	xx 9.8	9.8	
2. Secretary	x 2.0	xx 6.0	6.0	6.0	6.0	
3. Clerk/Typists	x 1.2	xx 3.6	xx 6.0	xx 8.4	8.4	
Total Supporting Staff	(2) 3.2	(6) 13.8	(4) 19.0	(4) 24.2	(1) 24.2	(17) \$84.4

Suggested Salary Scale by Singapore Delegates:

Director - \$8500

Deputy

Director - \$8000

Div. Head - \$7500 etc.

(A.A-2 Singapore)

BY FUNCTION & SKILL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
3. RESEARCH & DEVELOP.						
A. Professional Staff						
1. Div. Director	x 7.5	7.5	7.5	7.5	7.5	
2. Sr. Researcher		xx 14	x 21	x 28	28	
3. Research Assist.		xx 12	x 18	x 24	24	
4. Consultant (1st 2 yrs only)	x 20	20	-	-	-	
Total Professional Staff	(2) 27.5	(4) 53.5	(2) 46.5	(2) 59.5	(0) 59.5	(10) \$246.5
Total Professional Staff	(2)	(4)	(2)	(2)	(0)	(10)
B. Technicians & Clerical						
1. Research Tech.		xx 4.2	x 5.6	7.0	x 7.0	
2. Secretary	x 2.0	2.0	2.0	2.0	2.0	
3. Clerk/Typists		xx 2.0	x 3	4	4	
Total Supporting Staff	(1) 2.0	(4) 8.2	(2) 10.0	(2) 13.0	(0) 13.0	(9) \$46.8
GRAND TOTAL RESEARCH AND DEVELOPMENT	(3)	(8)	(4)	(4)	(0)	(19)
4. SPECIAL SERVICES						
A. Professional Staff						
1. Div. Director	x 7.5	7.5	7.5	7.5	7.5	
2. Special Services Officers		xx 12	xx 24	x 30	30	
3. Consultant (1st 2 yrs only)	x 18	18	-	-	-	
Total Professional Staff	(2) 25.5	(2) 37.5	(2) 31.5	(2) 37.5	(0) 37.5	(7) \$169.5
B. Technician & Clerical						
1. Technicians		x 4.2	x 5.6	x 7.0	7.0	
2. Secretary	x 2	2	2	2	2	
3. Clerk/Typists	x 1.2	x 3.4	x 3.6	x 4.8	4.8	
Total Supporting Staff	(2) 3.2	(3) 8.6	(2) 11.2	(3) 15.8	(0) 15.8	(10) \$52.26
GRAND TOTAL FOR SPECIAL SERVICES	(4)	(5)	(4)	(4)	(0)	(17)

(A.A.-2 Singapore)

BY FUNCTION & SKILL	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
5. INFORMATION CENTRE & CLEARING HOUSE						
A. Professional Staff						
1. Div. Director	x 7.5	7.5	7.5	7.5	7.5	
2. Editor	x 7	7	7	7	7	
3. Public Relations Specialist	x 5	5	5	5	5	
4. Graphic Arts Sup.	x 5	5	5	5	5	
5. Librarian	x 5	5	5	5	5	
6. Audio Visual Sup.			x 5	5	5	
Total Professional Staff	(6) 29.5	(0) 29.5	(1) 29.5	(0) 29.5	(0) 29.5	(7) \$174.5
B. Technical & Clerical Support						
1. Reports & Access. Specialists	x 4.0	8	x 12	x 16	16	
2. Periodicals	x 3	3	3	3	3	
3. Rep. & Dist. Clerks	xx 2.4	xx 4.8	x 6	x 7.2	7.2	
4. Library Attend.		xx 1	x 1.5	x 2.0	2.0	
5. Pub. Clerks	xx 2.4	xx 4.8	x 6.0	6.0	6.0	
6. Technicians - Graphic A. & A.V.	x 1.4	x 2.8	xx 5.6	x 7.0	7.0	
7. Secretary	x 2	2	2	2	2	
8. Clerk/Typists	x 1.2	x 3.6	x 6	6	6	
9. Cataloguing Clerks	x 1.2	x 3.6	x 3.6	3.6	3.6	
Total Supporting Staff	(11) 18.8	(10) 32.4	(9) 45.7	(4) 52.8	(0) 52.8	(34) \$202.5
GRAND TOTAL FOR INFOR. CENTRE & CLEARING HOUSE	(17)	(11)	(11)	(4)	(0)	(43)
6. BUILDING & GROUNDS						
1. Drivers	x .5	x 1	x 1.5	x 1.5	1.5	
2. Plant Supervisor			x 3	3	3	
3. Maintenance Tech.		x 1.2	xx 3.6	4.8	4.8	
4. Gardeners	xx .5	xxx 2	xxx 3.5	xxx 5.0	5.0	
5. Watchmen	x .5	xx 1.0	x 1.5	x 2.0	2.0	
6. Steward		xx 1.4	1.4	1.4	1.4	
7. Servants	xx 1.0	xxx 2.5	xxx 3.5	xxx 5.0	5.0	
8. Cooks						
9. Nurse	x	1.4	x 1.4	1.4	1.4	
10. Housekeeper	x 1.4	1.4	x 3.0	3.0	3.0	
Total Supporting Staff	(8) 5.3	(12) 11.9	(13) 22.4	(7) 26.1	(0) 26.1	(40) \$91.8

Singapore Alternative Budget

Revised Annexure A-3

PROJECTED EXPENDITURES - SALARY OF PROFESSIONAL STAFF

(In thousands USA Dollars)

FUNCTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	5 YEAR TOTAL
<u>ADMINISTRATION STAFF</u>	16.5	16.5	24	24	24	105.0
Consultant	20	20	-	-	-	40
<u>TRAINING STAFF</u>	14.5	56.5	105.5	161.5	196.5	534.5
Consultant	18	36	18	-	-	72
<u>RESEARCH & DEVELOPMENT</u>	7.5	33.5	46.5	59.5	59.5	206.5
Consultant	20	20	-	-	-	40
<u>SPECIAL SERVICES STAFF</u>	7.5	19.5	41.5	37.5	37.5	143.5
Consultant	18	18	-	-	-	36
<u>INFORMATION CENTRE STAFF</u>	29.5	29.5	34.5	34.5	34.5	162.5
TOTALS	151.5	249.5	270.0	317.0	352.0	1340.0

Assumed Salary Scales

Director - 8.5 thousand
Deputy Director - 8.0 thousand
Division Head - 7.5 thousand
Senior Staff - 7-6 thousand
Junior Staff - 6-5 thousand
Consultants as shown

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SINGAPORE ALTERNATIVE BUDGET

Figure 12

Revised

SUMMARY - OPERATING COSTS

(USA - Thousands of Dollars)

FUNCTION	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTALS
1. PROFESSIONAL STAFF*						
Administration	36.5	36.5	24.0	24.0	24.0	145.0
Training	32.5	92.5	125.5	161.5	196.5	606.5
Research & Development	27.5	53.5	46.5	59.5	59.5	246.5
Special Services	25.5	37.5	41.5	37.5	37.5	179.5
Information Centre	29.5	29.5	34.5	34.5	34.5	152.5
TOTALS	151.5	249.5	270.0	317.0	352.0	1,340.0
2. SUPPORTING STAFF**						
Administration	15.5	19.0	20.5	24.0	25.5	104.5
Training	3.2	13.8	19.0	24.2	24.2	84.4
Research & Development	2.0	8.2	10.6	13.0	13.0	46.8
Special Services	3.2	8.6	11.2	15.8	15.8	54.6
Information Centre	18.8	32.4	45.7	52.8	52.8	202.5
Building & Grounds	3.9	11.9	26.1	26.1	26.1	90.4
TOTALS	46.6	93.9	129.4	155.9	157.4	583.2
3. PROJECTS COSTS***						
Training	130.0	308.0	333.0	375.0	417.0	1,563.0
Research & Development	-	122.0	244.0	355.0	508.0	1,240.0
Special Services	-	13.0	26.0	44.0	58.0	141.0
Information Centre	-	-	-	-	-	-
TOTALS	130.0	433.0	603.0	785.0	983.0	2,944.0
GRAND TOTAL OPERATING COSTS	328.1	776.4	1002.4	1257.9	1492.4	4,867.2

Jy'68 Jy'69 Jy'70 Jy'71 Jy'72 Jy'73

* See Annexure A-3

** See Annexure A-4

*** See Annexure A-6

Singapore Alternative

Figure 13

REVISED SUMMARY BUDGET - PROJECTED FIVE YEAR PROGRAM
(USA - Thousands of Dollars)

COST ITEM	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	COST
<u>OPERATING COSTS</u>						
Professional Staff Salaries*	151.5	249.5	270.0	317.0	352.0	1,340.0
Supporting Staff Salaries**	46.6	93.9	129.4	155.9	159.4	583.2
Project Operations	130.0	443.0	603.0	785.0	983.0	2,944.0
TOTAL OPERATING COSTS	211.1	786.4	1002.4	1257.9	1494.4	4,867.2
<u>CAPITAL INVESTMENT***</u>						
Building & Grounds	583	750	747	514	490	3,084
Special Equipment	60	50	145	145	95	495
TOTAL CAPITAL INVESTMENT	643	800	892	659	585	3,579
GRAND TOTAL COSTS	854.1	1586.4	1894.4	1916.9	2079.4	8,446.2

* Includes consultants - See Annexure A-3 for details

** See Annexures A-4 and A-5 for details

*** See Annexure B-1 and Figure 16